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Performance of EXPERIMENTAL CORN HYBRIDS IN ILLINOIS



LOCATION OF
TEST FIELDS

By R. W. Jugenheimer,
K. E. Williams, and R. L. Harrison

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PERFORMANCE OF EXPERIMENTAL CORN HYBRIDS IN ILLINOIS, 1959

By R. W. JUGENHEIMER, K. E. WILLIAMS, and R. L. HARRISON¹

THE DEVELOPMENT AND EVALUATION of better-performing inbred lines and hybrids remain an important objective of the Illinois Agricultural Experiment Station. This report summarizes the results of performance trials of experimental corn hybrids conducted in 1959. More than 750 different hybrids were compared in nearly 3,500 plots. Most of the hybrids were developed by the senior author. Data from preliminary tests involving specialized phases of the Illinois corn-research program are not included in this bulletin.

The University of Illinois does not produce hybrid seed corn in commercial quantities. Hybrids that include new inbred lines may be produced under the "delayed-release" program adopted by the states in the corn belt. Multiplication of a new line is handled by the Station, and the production of single crosses in quantity is handled by the Illinois Seed Producers Association, Champaign, Illinois. If a new Illinois experimental hybrid gives satisfactory performance, the parental lines eventually are released for use by seedsmen.

In order to make the results of corn research more quickly available to the public, the University of Illinois has adopted a slight modification of the "delayed-release" policy as it pertains to Illinois-developed inbred lines. Inbred lines of corn developed by the University of Illinois may be released to the public when they have demonstrated superior combining ability for yield, standability, disease resistance, insect resistance, chemical composition, male sterility, or other characters. Such Illinois lines may form a part of a new hybrid or be used in other ways by corn breeders. Inbred lines of corn developed by others will not be released without their approval.

Hand-pollinated seed of released Illinois inbred lines usually is available for a fee in packets containing 25 to 100 kernels. New releases are announced annually about April 1. Inquiries may be addressed to the Agronomy Department, University of Illinois, Urbana, Illinois.

Since most of the hybrids whose performance is recorded here are not yet in commercial use, the information about them is of most value to producers of hybrid seed. The 1959 performance of hybrids available to farmers in commercial quantities is reported in Bulletin 651 of this Station.

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MATERIAL TESTED

Double crosses for consideration of seedsmen. Nearly 400 different double-cross hybrids were grown at four locations. The seed was produced by controlled hand-pollination. The double-cross hybrids whose performance is shown in this report and the tables in which each appears are shown in Table 15. This table also contains the pedigrees of the hybrids tested. *In the pedigrees, the order of the single crosses and of the lines in the single crosses has no significance; it does not indicate which should be used as seed or pollen parent.*

Illinois yellow hybrids are numbered consecutively below 2000 and above 3000. White hybrids are numbered in the 2000 series; these white hybrids are usually followed by the letter W. Hybrids that have performed well after regional testing in several corn-belt states have been designated AES (Agricultural Experiment Station) hybrids. Hybrids in the 600 series are similar to Illinois 1277 in maturity; those in the 700 series correspond in maturity to Illinois 21; those in the 800 series correspond to Illinois 1570; and those in the 900 series to Illinois 1851.

The letter A or B following an Illinois hybrid number indicates that the combination of inbred lines making up the hybrid has been rearranged or permuted. For example, if the original pedigree of an Illinois hybrid was $(1 \times 2) (3 \times 4)$, the letter A following the number means that the hybrid was put together $(1 \times 3) (2 \times 4)$, the letter B, $(1 \times 4) (2 \times 3)$. A difference in reciprocals is not recognized in this method. When a short dash (-) followed by a number occurs as part of an Illinois hybrid number, it means that a tested related line has been substituted for one of the inbred lines included in the original hybrid.

Hybrids for prediction studies. Twelve sets of three-way crosses differing in maturity were tested in 1959. The three-way crosses in Tables 5, 7, and 11 are a part of the "uniform" tests conducted cooperatively by corn-belt states and the U. S. Department of Agriculture. Seed of the unreleased inbred lines involved in these crosses was contributed by the state or by the federal corn breeder who developed them. Three-way crosses whose performance is reported in Tables 3, 8, 12, and 13 were developed by the Illinois Station and tested only in Illinois.

Performance of single-cross, three-way-cross, and top-cross hybrids is of interest to corn breeders, producers of hybrid seed corn, and farmers. Characteristics of single crosses such as yield, standability,

and size, shape, and quality of seed definitely affect the practical production of hybrid seed corn. Some farmers are interested in growing single-cross and three-way-cross hybrids commercially because of their attractive appearance and extreme uniformity. Use of single-cross and three-way-cross data for the prediction of desirable double-cross combinations creates additional interest in the performance of single crosses and three-way crosses.

Prediction studies are an extremely valuable part of a research program. Methods are available to predict the performance of the better hybrid combinations without making and testing large numbers of undesirable crosses. For example, 1,225 single crosses and 690,900 double crosses are possible with 50 inbred lines. However, by using single-cross performance data, the corn breeder can predict which of the many possible double-cross combinations are likely to be most desirable. The following six single crosses can be made with four inbred lines: $A \times B$, $A \times C$, $A \times D$, $B \times C$, $B \times D$, and $C \times D$. The average performance of the four non-parental single crosses gives the predicted performance of a specific double-cross hybrid. For instance, the average yields of the four single crosses $A \times C$, $A \times D$, $B \times C$, and $B \times D$ give the predicted yield of double cross ($A \times B$) ($C \times D$). The procedure in predicting acre yields and percentage of erect plants from single-cross data is shown on page 6 of Illinois Agricultural Experiment Station Bulletin 597.

Similar predictions can be made for other characteristics. Predicted hybrid combinations, however, should always be thoroughly tested under field conditions before being put into commercial production.

Three-way crosses also provide useful predictions of the performance of double-cross hybrids. A large number of inbred lines can be compared, and the method is especially valuable where a desirable seed-parent single cross is available for use as a tester. Three-way crosses provide information on specific hybrids and may often eliminate the time and expense required for testing inbred lines in top crosses and single crosses. The procedure in predicting acre yields and percentage of erect plants from three-way-cross data is also shown on page 6 of Bulletin 597.

Top crosses are simple to produce and often are useful in early stages of a breeding program. For example, a single cross from the corn belt of the United States might contribute genes for high yield and standability, and an open-pollinated variety from Europe might contribute adaptation to local European conditions. Such top crosses might

thus combine the desirable traits of the American single cross and the European open-pollinated variety. Most top crosses, however, are temporary expedients, which usually are eventually replaced by double crosses. Top crosses are useful also for evaluating the performance of inbred lines. They also provide a means of selecting promising open-pollinated varieties for use as source material for the development of inbred lines.

MEASURING PERFORMANCE

Trials were made at four locations: in DeKalb county in northern Illinois, in Peoria county in north-central Illinois, in Champaign county in central Illinois, and in Fayette county in south-central Illinois. These locations are representative of the soil, rainfall, and length of growing season in their respective areas.

Table 1.—GENERAL INFORMATION: Tests of Illinois Experimental Corn Hybrids, 1959

| County ^a | Section of state | Table number | Plants per hill | Date of— | |
|---------------------|------------------|--------------|-----------------|----------|------------|
| | | | | Planting | Harvesting |
| DeKalb..... | Northern | 2-3 | 5 | May 14 | Oct. 13 |
| Peoria..... | North-Central | 4-5 | 5 | May 18 | Oct. 19 |
| Champaign..... | Central | 6 | 5 | May 7 | Oct. 15 |
| Champaign..... | Central | 7 | 5 | May 28 | Nov. 3 |
| Champaign..... | Central | 8 | 5 | May 28 | Oct. 28 |
| Champaign..... | Central | 9 | 5 | May 28 | Oct. 23 |
| Fayette..... | South-Central | 10-12 | 4 | June 3 | Nov. 10 |

^a The fields are located near the following cities and towns: in DeKalb county near DeKalb, in Peoria county near Peoria, in Champaign county near Urbana, and in Fayette county near Brownstown.

Hybrids were compared for grain yield, maturity, shelling percentage, standability, ear height, dropped ears, and resistance to smut. Only hybrids of similar maturity were tested on the same field. A familiar hybrid whose maturity was considered the standard for the group is named in each table heading. Percentages of oil and protein in the grain were determined on special hybrids.

General information concerning the tests is given in Table 1.

Field plot design. The data in Tables 3, 5, 7, 8, 10, 11, 12, 13, and 14 were obtained in randomized blocks. Rectangular lattice designs were used for the data reported in Tables 2, 4, 6, and 9.

Method of planting. All plots in these tests were planted, thinned, and harvested by hand in well-fertilized fields prepared in the usual way for corn. Individual plots were 2 \times 5 or 1 \times 10 hills in area. Six kernels were planted in hills spaced 40 inches apart. Hills were thinned to 5 plants at DeKalb, Peoria, and Urbana, and to 4 plants at Brownstown.

Acre grain yields. Acre yields are reported as shelled grain containing 15.5 percent moisture, the maximum allowable for No. 2 corn. Data from all plots are included in the report on yield. The only correction for imperfect stands was the following adjustment for missing hills:

$$\text{Ear weight in field} \times \left[1 + \left(\frac{\text{missing hills}}{\text{hills present}} \times .7 \right) \right] = \text{adjusted ear weight}$$

This adjustment adds 0.7 percent of the average hill yield for each missing hill, and assumes that 0.3 percent is made up by the increased yield of surrounding hills.

Shelling percentage and moisture in grain. All ears from one replication of each entry were shelled immediately after harvest. The percentage of moisture in the shelled grain was determined with a Steinlite moisture meter.

Stand. Counts of the number of missing hills and number of missing plants were made in late summer in each plot. The data are reported as percentage of a perfect stand. Yields were corrected for missing hills.

Ear height. Representative plants in each plot were measured to determine the distance in inches from the soil to the ear-bearing node.

Erect plants and dropped ears. Percentage of erect plants and of dropped ears in each plot of each entry was determined by actual counts at the time of harvest. Stalks broken above the ear were not considered lodged. Stalks leaning less than 45 degrees were considered as erect.

Leaf blight. Readings were recorded on all plots at DeKalb. A grade of 1 denotes the greatest amount of resistance, while a grade of 5 signifies extreme susceptibility to leaf blights.

Smutted plants. The number of smutted plants was recorded on all plots in late summer in fields having considerable smut infection. These data are reported in the tables as percent of smutted plants.

Oil and protein content. Percentage of oil and of protein was determined by standard procedures on representative grain samples.

RESULTS OF THE TESTS

Data obtained from the tests are summarized in Tables 2 to 14. Long-time averages are more reliable indexes of the performance of hybrids than a single year's result. The parts of the tables summarizing the results of two or three years therefore deserve the most weight when the results are studied.

Relative performance cannot be determined with absolute accuracy by any method of testing. Small differences between entries are seldom of any significance. In fact, small differences are to be expected among plots planted even with the same lot of seed. Variations in growing conditions such as soil fertility are reduced but not completely eliminated by replicating the same entry several times in the same test. Unavoidable variation may be determined by a mathematical procedure known as analysis of variance. From this procedure figures may be obtained that represent the range which differences between two entries must exceed before those entries can be considered significantly different. The method used to determine this range is called the "Multiple Range Test."¹ This method considers the number of entries that fall within the range as well as the variability of the test. Data shown in **boldface** were not statistically different from the best performance for that characteristic.

Double crosses. The performance of nearly 400 new double-cross hybrids is shown in Tables 2, 4, 5, 6, 7, 9, 10, and 11. Many of these hybrids were superior to popular combinations now being grown.

Three-way crosses. Data on three-way crosses are reported in Tables 3, 5, 7, 8, 11, 12, 13, and 14. These data permit predicting the performance of hundreds of promising double crosses. Some of the three-way-cross hybrids may be grown commercially because of their excellent performance, extreme uniformity, and attractive appearance.

High-oil and high-protein hybrids. Three new corn hybrids, Ill. 6021 ((R75 \times R76) (R84 \times K4)), Ill. 6052 ((R78 \times 38-11) (R84 \times K4)), and Ill. 6001 (R78 \times (K4 \times 38-11)), have been developed in the Agronomy Department of the University of Illinois. Foundation single-cross seed of these three hybrids is available to seedsmen interested in producing seed in 1960. Such seed may be obtained from the Illinois Seed Producers Association, 107 N. 5th Street, Champaign, Illinois. Seed of Ill. hybrids 6001, 6021, and 6052 for farm use is available for the 1960 growing season from the following producers:

¹ "Multiple Range and Multiple F Tests," by D. B. Duncan in *Biometrics* 11 (1), 1-43. 1955.

Illinois Seed Producers Association, 107 N. 5th Street, Champaign, Illinois; Mountjoy Seed Company, Atlanta, Illinois; George Pfeifer, Arcola, Illinois; Producers Seed Company, Piper City, Illinois; MFA, Marshall, Missouri; and Ruff Seed Company, Amanda, Ohio.

These new hybrids yield about 30 percent more oil and 10 percent more protein than present commercial hybrids. In addition, they are similar to standard hybrids in grain yield, standability, and other agronomic traits. Nationwide use of adapted high-oil hybrids would produce almost as much oil as is now received from butterfat, soybeans, cotton, and flax. These new high-oil hybrids should benefit both the starch industry and the livestock feeders.

Results of tests with high-oil and high-protein hybrids are given in Table 14.

Single crosses and hybrids involving related inbred lines. Some farmers are interested in hybrids with greater uniformity and performance than are available in double-cross hybrids. Single-cross hybrids are more attractive and uniform in appearance than other types of hybrids. The relatively high cost of producing seed of single crosses usually limits their use to situations where extreme uniformity is important.

Sister-line crosses are combinations between sister strains of the same inbred line. Some sister-line crosses have considerably greater yield, vigor, and standability than the original inbred line, and may be practical for the commercial use of single-cross hybrids. Data on a group of inbred lines and sister-line crosses were reported in Table 11 of Illinois Bulletin 636. Related versions of the same inbred are grouped together in Table 11A of Bulletin 636. Some growers are interested in producing $\text{Hy} \times \text{Oh}7$ because of its high yield and ability to yield well under high plant populations. $\text{Hy}2$ yielded 35 bushels an acre, whereas a related sister-line cross $\text{R}158 \times \text{CI.42A}$ yielded 125 bushels per acre. This latter hybrid might be used as a seed parent. In addition, it is resistant to leaf blight and is higher in protein content. $\text{Oh}7$ yielded 51 bushels an acre, whereas $\text{Oh}7 \times \text{Oh}7\text{A}$, a sister-line cross, yielded 85 bushels an acre. This cross might be used as the pollen parent for the commercial production of a modified version of $\text{Hy} \times \text{Oh}7$. Many of the other sister-line crosses appear to be promising and could be used as seed parents of single crosses.

The performance of hybrids involving related inbred lines is given in Table 9 of this bulletin. Some of these hybrids produced higher grain yields, had greater uniformity of plant and ear, and appear to be more practical to produce than the original single-cross hybrids.

Table 2.—DOUBLE CROSSES OF ILLINOIS 1277 MATURITY
Tested in Northern Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut | Leaf blight |
|---|-------------|---------------|---------------------------|---------------|-----------------|------------|---------------|-----------------|--------|----------------|
| A — Three-year averages, 1957-1959 | | | | | | | | | | |
| | | bu. | perct. | perct. | perct. | perct. | in. | perct. | perct. | score |
| 1 | Ill. 3152. | 128 | 28 | 78 | 88 | 99 | 43 | ... | ... | ... |
| 2 | Ill. 1952. | 126 | 25 | 78 | 85 | 98 | 44 | ... | ... | ... |
| 3 | Ill. 3009. | 126 | 24 | 79 | 90 | 98 | 48 | ... | ... | ... |
| 4 | Ill. 1936. | 124 | 27 | 77 | 84 | 99 | 45 | ... | ... | ... |
| 5 | Ill. 1961. | 123 | 24 | 78 | 87 | 99 | 47 | ... | ... | ... |
| 6 | Ill. 1862. | 123 | 29 | 78 | 92 | 100 | 40 | ... | ... | ... |
| 7 | Ill. 1559B. | 120 | 26 | 77 | 83 | 97 | 44 | ... | ... | ... |
| 8 | Ill. 1959. | 120 | 26 | 78 | 91 | 98 | 45 | ... | ... | ... |
| 9 | Ill. 3043. | 120 | 30 | 79 | 92 | 97 | 47 | ... | ... | ... |
| 10 | Ill. 1955. | 120 | 24 | 77 | 90 | 97 | 44 | ... | ... | ... |
| 11 | Ill. 1962. | 120 | 24 | 78 | 87 | 97 | 47 | ... | ... | ... |
| 12 | Ill. 1969A. | 120 | 29 | 78 | 88 | 97 | 48 | ... | ... | ... |
| 13 | Ill. 3046. | 119 | 27 | 77 | 90 | 97 | 49 | ... | ... | ... |
| 14 | AES 601. | 119 | 26 | 77 | 82 | 98 | 44 | ... | ... | ... |
| 15 | Ill. 1960. | 119 | 26 | 79 | 84 | 99 | 45 | ... | ... | ... |
| 16 | Ill. 1957. | 118 | 26 | 78 | 83 | 99 | 45 | ... | ... | ... |
| 17 | Ill. 1958. | 118 | 24 | 78 | 82 | 96 | 47 | ... | ... | ... |
| 18 | AES 702. | 118 | 28 | 75 | 83 | 98 | 48 | ... | ... | ... |
| 19 | AES 514. | 115 | 23 | 78 | 94 | 99 | 44 | ... | ... | ... |
| 20 | Ill. 1864. | 115 | 27 | 77 | 81 | 99 | 41 | ... | ... | ... |
| 21 | Ill. 2247W. | 114 | 28 | 76 | 80 | 97 | 49 | ... | ... | ... |
| 22 | Ill. 1091A. | 113 | 27 | 77 | 66 | 98 | 48 | ... | ... | ... |
| 23 | Ill. 1555A. | 111 | 23 | 76 | 79 | 96 | 46 | ... | ... | ... |
| 24 | AES 510. | 111 | 24 | 77 | 78 | 96 | 44 | ... | ... | ... |
| 25 | AES 610. | 111 | 25 | 79 | 93 | 98 | 39 | ... | ... | ... |
| 26 | Ill. 1277. | 110 | 27 | 77 | 68 | 99 | 45 | ... | ... | ... |
| 27 | Ill. 1560A. | 110 | 29 | 78 | 80 | 96 | 44 | ... | ... | ... |
| 28 | Ohio K24. | 107 | 26 | 78 | 76 | 94 | 42 | ... | ... | ... |
| 29 | Ohio M15. | 100 | 24 | 78 | 71 | 91 | 47 | ... | ... | ... |
| 30 | Ill. 101. | 100 | 26 | 77 | 65 | 93 | 44 | ... | ... | ... |
| 31 | Ill. 21. | 92 | 28 | 77 | 73 | 85 | 51 | ... | ... | ... |
| | Average. | 116 | 26 | 78 | 83 | 97 | 45 | ... | ... | ... |
| B — Two-year averages, 1958-1959 | | | | | | | | | | |
| 1 | Ill. 3173. | 134 | 28 | 82 | 89 | 100 | 48 | ... | ... | ... |
| 2 | Ill. 3176B. | 130 | 31 | 77 | 84 | 98 | 47 | ... | ... | ... |
| 3 | Ill. 3152A. | 128 | 26 | 78 | 83 | 100 | 44 | ... | ... | ... |
| 4 | Ill. 3167B. | 128 | 30 | 78 | 85 | 98 | 49 | ... | ... | ... |
| 5 | Ill. 3152. | 128 | 28 | 78 | 83 | 100 | 44 | ... | ... | ... |
| 6 | Ill. 3169B. | 127 | 30 | 78 | 84 | 98 | 44 | ... | ... | ... |
| 7 | Ill. 1936. | 126 | 27 | 78 | 78 | 100 | 46 | ... | ... | ... |
| 8 | Ill. 1952. | 126 | 26 | 79 | 79 | 98 | 45 | ... | ... | ... |
| 9 | Ill. 3174. | 125 | 26 | 78 | 84 | 100 | 47 | ... | ... | ... |
| 10 | Ill. 1862. | 124 | 30 | 80 | 88 | 100 | 42 | ... | ... | ... |
| 11 | Ill. 1961. | 123 | 24 | 79 | 82 | 100 | 46 | ... | ... | ... |
| 12 | Ill. 3287. | 123 | 30 | 78 | 94 | 98 | 44 | ... | ... | ... |
| 13 | Ill. 1559B. | 122 | 26 | 78 | 74 | 98 | 44 | ... | ... | ... |
| 14 | Ill. 3009. | 122 | 25 | 79 | 85 | 98 | 50 | ... | ... | ... |
| 15 | Ill. 2247W. | 122 | 28 | 76 | 70 | 99 | 50 | ... | ... | ... |
| 16 | Ill. 1959. | 122 | 26 | 79 | 88 | 98 | 46 | ... | ... | ... |
| 17 | Ill. 1962. | 121 | 24 | 78 | 82 | 98 | 47 | ... | ... | ... |
| 18 | Ill. 1955. | 119 | 24 | 77 | 86 | 100 | 44 | ... | ... | ... |
| 19 | AES 601. | 118 | 26 | 77 | 75 | 99 | 45 | ... | ... | ... |
| 20 | Ill. 1958. | 118 | 25 | 78 | 74 | 99 | 47 | ... | ... | ... |
| 21 | Ill. 1960. | 118 | 26 | 79 | 77 | 100 | 45 | ... | ... | ... |
| 22 | Ill. 1969A. | 117 | 30 | 78 | 84 | 98 | 50 | ... | ... | ... |

(Table is continued on next page)

Table 2.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut | Leaf blight |
|---|-------------|---------------|---------------------------|---------------|-----------------|--------|---------------|-----------------|--------|----------------|
| B — Two-year averages, 1958-1959 — concluded | | | | | | | | | | |
| | | bu. | perct. | perct. | perct. | perct. | in. | perct. | perct. | score |
| 23 | Ill. 1957 | 116 | 27 | 78 | 74 | 100 | 44 | ... | ... | ... |
| 24 | Ill. 3043 | 116 | 32 | 78 | 88 | 98 | 48 | ... | ... | ... |
| 25 | Ill. 3046 | 116 | 29 | 78 | 86 | 99 | 49 | ... | ... | ... |
| 26 | AES 610 | 114 | 26 | 79 | 90 | 99 | 40 | ... | ... | ... |
| 27 | AES 514 | 113 | 25 | 78 | 92 | 100 | 46 | ... | ... | ... |
| 28 | AES 702 | 113 | 29 | 76 | 75 | 100 | 49 | ... | ... | ... |
| 29 | Ill. 1091A | 110 | 27 | 76 | 52 | 99 | 50 | ... | ... | ... |
| 30 | Ill. 1864 | 110 | 29 | 77 | 72 | 100 | 42 | ... | ... | ... |
| 31 | AES 510 | 109 | 25 | 76 | 68 | 98 | 45 | ... | ... | ... |
| 32 | Ill. 1555A | 108 | 24 | 75 | 70 | 98 | 46 | ... | ... | ... |
| 33 | Ohio K24 | 108 | 26 | 79 | 66 | 94 | 44 | ... | ... | ... |
| 34 | Ill. 1560A | 108 | 30 | 78 | 70 | 97 | 43 | ... | ... | ... |
| 35 | Ohio M15 | 108 | 24 | 80 | 60 | 98 | 47 | ... | ... | ... |
| 36 | Ill. 101 | 104 | 27 | 78 | 54 | 100 | 44 | ... | ... | ... |
| 37 | Ill. 1277 | 104 | 26 | 77 | 55 | 100 | 46 | ... | ... | ... |
| 38 | Ill. 21 | 100 | 28 | 77 | 63 | 98 | 52 | ... | ... | ... |
| 39 | Ill. 6052 | 100 | 35 | 76 | 62 | 98 | 56 | ... | ... | ... |
| 40 | Ill. 6021 | 95 | 32 | 76 | 63 | 100 | 57 | ... | ... | ... |
| | Average | 117 | 27 | 78 | 77 | 99 | 46 | ... | ... | ... |
| C — 1959 results (3 replications) | | | | | | | | | | |
| 1 | Ill. 3301 | 132 | 24 | 80 | 95 | 100 | 40 | 0 | 8 | 1.4 |
| 2 | Ill. 3173 | 130 | 24 | 82 | 91 | 99 | 44 | 1 | 3 | 2.6 |
| 3 | Ill. 3176B | 128 | 28 | 77 | 94 | 98 | 42 | 3 | 8 | 2.5 |
| 4 | Ill. 3303 | 128 | 25 | 79 | 89 | 100 | 43 | 2 | 2 | 1.5 |
| 5 | Ill. 3270 | 125 | 25 | 77 | 92 | 99 | 40 | 1 | 4 | 2.3 |
| 6 | Ill. 3152B1 | 124 | 26 | 77 | 93 | 99 | 40 | 1 | 8 | 2.0 |
| 7 | Ill. 3379 | 124 | 24 | 79 | 90 | 98 | 42 | 1 | 4 | 2.7 |
| 8 | Ill. 1952 | 123 | 22 | 78 | 89 | 98 | 42 | 1 | 10 | 2.2 |
| 9 | Ill. 3152A | 123 | 24 | 78 | 93 | 100 | 41 | 1 | 7 | 2.3 |
| 10 | Ill. 1962 | 122 | 22 | 79 | 80 | 99 | 44 | 0 | 3 | 3.3 |
| 11 | Ill. 3009 | 122 | 22 | 79 | 84 | 99 | 44 | 3 | 7 | 3.1 |
| 12 | Ill. 3167B | 122 | 27 | 78 | 94 | 99 | 44 | 3 | 3 | 2.2 |
| 13 | Ill. 3300 | 122 | 25 | 78 | 82 | 99 | 43 | 1 | 5 | 1.9 |
| 14 | Ill. 3383 | 122 | 25 | 79 | 87 | 100 | 44 | 0 | 5 | 2.6 |
| 15 | Ill. 1959 | 121 | 22 | 78 | 89 | 100 | 44 | 1 | 7 | 3.1 |
| 16 | Ill. 3268 | 121 | 27 | 80 | 96 | 97 | 42 | 1 | 9 | 2.1 |
| 17 | Ill. 3311 | 121 | 27 | 78 | 90 | 100 | 43 | 0 | 1 | 2.4 |
| 18 | Ill. 3382 | 121 | 26 | 79 | 96 | 99 | 45 | 3 | 5 | 2.8 |
| 19 | Ill. 3266 | 120 | 26 | 79 | 86 | 96 | 41 | 6 | 3 | 2.6 |
| 20 | Ill. 3271 | 120 | 26 | 81 | 90 | 99 | 40 | 4 | 9 | 3.1 |
| 21 | Ill. 3381 | 120 | 25 | 79 | 91 | 100 | 44 | 2 | 3 | 2.8 |
| 22 | Iowa 4967 | 120 | 26 | 78 | 84 | 100 | 45 | 7 | 6 | 1.5 |
| 23 | Ill. 3174 | 119 | 25 | 78 | 83 | 100 | 47 | 1 | 3 | 2.8 |
| 24 | Ill. 3267 | 118 | 26 | 77 | 89 | 96 | 44 | 8 | 2 | 2.8 |
| 25 | Ill. 3274 | 118 | 26 | 77 | 97 | 99 | 44 | 4 | 2 | 3.0 |
| 26 | Ill. 3310 | 118 | 27 | 78 | 91 | 99 | 41 | 4 | 1 | 2.0 |
| 27 | Ill. 1955 | 117 | 21 | 79 | 80 | 100 | 43 | 1 | 11 | 3.6 |
| 28 | Ill. 1960 | 117 | 23 | 78 | 88 | 99 | 42 | 0 | 9 | 1.6 |
| 29 | Ill. 1961 | 117 | 23 | 79 | 83 | 99 | 43 | 2 | 2 | 3.0 |
| 30 | Ill. 3169B | 117 | 27 | 77 | 91 | 97 | 41 | 3 | 9 | 2.9 |
| 31 | Ill. 3275 | 117 | 26 | 82 | 91 | 99 | 44 | 1 | 3 | 2.0 |
| 32 | Ill. 3287 | 117 | 26 | 77 | 93 | 96 | 40 | 1 | 4 | 1.3 |
| 33 | Ill. 3302 | 117 | 24 | 78 | 92 | 99 | 45 | 3 | 8 | 2.4 |
| 34 | Ill. 3302A1 | 117 | 24 | 78 | 92 | 100 | 42 | 0 | 8 | 1.4 |
| 35 | Ill. 3305 | 117 | 24 | 78 | 77 | 99 | 40 | 3 | 11 | 2.2 |
| 36 | Ill. 1559B | 116 | 23 | 80 | 95 | 97 | 40 | 1 | 7 | 2.3 |
| 37 | Ill. 1862 | 116 | 26 | 79 | 96 | 100 | 37 | 1 | 12 | 2.2 |
| 38 | Ill. 1936 | 116 | 22 | 78 | 84 | 100 | 43 | 3 | 6 | 3.0 |
| 39 | Ill. 3043 | 115 | 27 | 78 | 91 | 99 | 45 | 4 | 4 | 3.0 |
| 40 | Ill. 3152 | 115 | 24 | 77 | 92 | 99 | 41 | 1 | 11 | 2.7 |

(Table is concluded on next page)

Table 2.—Concluded

| Rank in yield or code | Entry | Acre yield | Moisture in grain | Shell-ing | Erect plants | Stand | Ear height | Dropped ears | Smut | Leaf blight |
|--|-------------------------------|------------|-------------------|-----------|--------------|-------|------------|--------------|------|-------------|
| C—1959 results (3 replications)—concluded | | | | | | | | | | |
| 41 | III. 3313..... | 115 | 23 | 80 | 96 | 98 | 43 | 4 | 6 | 1.8 |
| 42 | III. 3380..... | 115 | 25 | 79 | 92 | 100 | 46 | 5 | 2 | 2.6 |
| 43 | III. 2247W..... | 114 | 24 | 77 | 80 | 100 | 47 | 8 | 6 | 2.7 |
| 44 | III. 3152A1..... | 114 | 23 | 79 | 93 | 100 | 40 | 2 | 6 | 1.9 |
| 45 | III. 3309-1..... | 114 | 25 | 77 | 90 | 100 | 44 | 5 | 4 | 2.6 |
| 46 | III. 3046..... | 113 | 25 | 77 | 90 | 99 | 44 | 2 | 2 | 1.7 |
| 47 | III. 1957..... | 112 | 23 | 79 | 84 | 100 | 44 | 3 | 3 | 3.1 |
| 48 | III. 3179..... | 112 | 26 | 80 | 52 | 99 | 49 | 3 | 5 | 3.7 |
| 49 | III. 3272..... | 112 | 27 | 80 | 97 | 100 | 43 | 2 | 8 | 2.8 |
| 50 | III. 3309..... | 112 | 26 | 76 | 88 | 99 | 46 | 3 | 2 | 2.5 |
| 51 | III. 3312..... | 112 | 27 | 80 | 94 | 99 | 43 | 1 | 1 | 2.3 |
| 52 | III. 3312-1..... | 112 | 25 | 73 | 86 | 99 | 43 | 3 | 3 | 1.9 |
| 53 | III. 1958..... | 111 | 22 | 80 | 82 | 99 | 43 | 0 | 4 | 1.9 |
| 54 | III. 1969A..... | 111 | 26 | 78 | 93 | 99 | 45 | 4 | 4 | 2.2 |
| 55 | III. 3152-1..... | 111 | 24 | 78 | 91 | 99 | 38 | 2 | 6 | 2.4 |
| 56 | III. 3269..... | 111 | 26 | 77 | 93 | 99 | 41 | 1 | 3 | 2.1 |
| 57 | III. 3307..... | 109 | 26 | 76 | 85 | 99 | 47 | 1 | 2 | 2.2 |
| 58 | AES 610..... | 108 | 22 | 79 | 93 | 99 | 40 | 2 | 3 | 2.5 |
| 59 | III. 3300A..... | 108 | 25 | 77 | 87 | 99 | 41 | 1 | 6 | 1.7 |
| 60 | AES 514..... | 107 | 23 | 78 | 95 | 100 | 45 | 2 | 3 | 2.2 |
| 61 | III. 3273..... | 107 | 28 | 78 | 96 | 96 | 40 | 6 | 5 | 2.7 |
| 62 | III. 3308..... | 107 | 25 | 78 | 85 | 100 | 48 | 3 | 4 | 2.0 |
| 63 | III. 6109..... | 107 | 25 | 76 | 78 | 100 | 50 | 7 | 9 | 3.3 |
| 64 | III. 3152B..... | 106 | 23 | 75 | 87 | 99 | 42 | 1 | 7 | 2.4 |
| 65 | III. 3304..... | 106 | 27 | 76 | 91 | 98 | 42 | 0 | 14 | 2.5 |
| 66 | III. 1560A..... | 105 | 26 | 78 | 90 | 97 | 40 | 2 | 9 | 2.6 |
| 67 | III. 3265..... | 104 | 28 | 78 | 93 | 99 | 42 | 3 | 4 | 2.5 |
| 68 | Iowa 5052..... | 104 | 24 | 74 | 92 | 97 | 41 | 7 | 3 | 2.4 |
| 69 | Ohio K24..... | 103 | 25 | 79 | 68 | 97 | 43 | 5 | 4 | 3.0 |
| 70 | AES 510..... | 102 | 22 | 77 | 85 | 99 | 42 | 7 | 14 | 2.7 |
| 71 | III. 3306..... | 100 | 26 | 76 | 86 | 100 | 46 | 5 | 2 | 1.5 |
| 72 | AES 601..... | 99 | 23 | 77 | 88 | 99 | 40 | 2 | 7 | 3.7 |
| 73 | III. 1091A..... | 99 | 24 | 76 | 72 | 99 | 46 | 3 | 7 | 3.9 |
| 74 | III. 1555A..... | 96 | 21 | 76 | 76 | 97 | 43 | 2 | 10 | 3.1 |
| 75 | III. 6115..... | 96 | 23 | 75 | 79 | 100 | 45 | 8 | 3 | 2.3 |
| 76 | Ohio M15..... | 96 | 22 | 78 | 57 | 97 | 44 | 2 | 5 | 3.3 |
| 77 | III. 1864..... | 95 | 26 | 77 | 86 | 100 | 38 | 2 | 7 | 2.9 |
| 78 | III. 6021..... | 93 | 25 | 77 | 74 | 99 | 52 | 5 | 6 | 3.0 |
| 79 | AES 702..... | 92 | 25 | 74 | 94 | 100 | 44 | 8 | 6 | 2.4 |
| 80 | III. 6052..... | 92 | 30 | 77 | 67 | 100 | 49 | 3 | 13 | 3.5 |
| 81 | III. 101..... | 89 | 24 | 77 | 85 | 100 | 40 | 2 | 13 | 3.0 |
| 82 | III. 21..... | 86 | 25 | 76 | 77 | 99 | 48 | 2 | 8 | 4.6 |
| 83 | III. 1277..... | 84 | 23 | 77 | 79 | 99 | 41 | 2 | 5 | 4.0 |
| | Average..... | 112 | 25 | 78 | 87 | 99 | 43 | 3 | 6 | 2.5 |
| D—Single and sister-line crosses | | | | | | | | | | |
| 84 | Hy2×WF9..... | 86 | 26 | 74 | 83 | 100 | 44 | 3 | 6 | 4.0 |
| 85 | (R158×CI.42)(WF9×R75)..... | 79 | 25 | 76 | 75 | 99 | 51 | 6 | 4 | 3.4 |
| 86 | Hy2×Oh7..... | 124 | 26 | 80 | 81 | 99 | 53 | 3 | 3 | 3.1 |
| 87 | (R158×CI.42A)(Oh7×Oh7A)..... | 96 | 29 | 77 | 83 | 100 | 54 | 3 | 5 | 3.1 |
| 88 | Hy2×187-2..... | 90 | 26 | 78 | 63 | 99 | 50 | 9 | 2 | 4.0 |
| 89 | (R158×CI.42A)(R84×W187R)..... | 60 | 26 | 75 | 67 | 99 | 51 | 9 | 6 | 5.0 |
| 90 | R158×CI.42A..... | 87 | 28 | 75 | 80 | 99 | 54 | 11 | 3 | 2.9 |
| | Average..... | 89 | 26 | 76 | 76 | 99 | 51 | 6 | 4 | 3.6 |

Table 3.—THREE-WAY CROSSES AND STANDARDS
Tested in Northern Illinois, 1959

(Data in boldface were not statistically different
from the best performance for that characteristic)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut | Leaf blight |
|---|---------------|---------------|---------------------------|---------------|-----------------|------------|-----------|-----------|-----------------|------|----------------|
| | | | | | | | Plant | Ear | | | |
| A—Inbred lines crossed with (WF9 × Oh43) | | | | | | | | | | | |
| 1 | R71. | 114 | 28 | 82 | 97 | 98 | 84 | 38 | 3 | 3 | 4.0 |
| 2 | R74. | 99 | 26 | 80 | 92 | 97 | 88 | 36 | 0 | 3 | 2.0 |
| 3 | R74A. | 91 | 27 | 75 | 98 | 99 | 87 | 36 | 1 | 8 | 1.5 |
| 4 | R76. | 111 | 26 | 79 | 69 | 95 | 94 | 48 | 10 | 2 | 2.0 |
| 5 | R78. | 116 | 27 | 82 | 89 | 94 | 88 | 41 | 3 | 3 | 2.0 |
| 6 | R84. | 95 | 25 | 80 | 82 | 88 | 88 | 46 | 7 | 11 | 3.0 |
| 7 | R101. | 105 | 25 | 79 | 93 | 97 | 91 | 40 | 0 | 9 | 4.0 |
| 8 | R104. | 100 | 26 | 83 | 81 | 98 | 86 | 40 | 1 | 1 | 4.0 |
| 9 | R109B. | 109 | 26 | 82 | 97 | 93 | 88 | 42 | 0 | 1 | 3.0 |
| 10 | R112. | 115 | 25 | 83 | 96 | 96 | 94 | 40 | 5 | 10 | 2.5 |
| 11 | R113. | 113 | 24 | 79 | 82 | 100 | 84 | 40 | 1 | 3 | 2.5 |
| 12 | R114. | 108 | 24 | 79 | 91 | 95 | 98 | 41 | 1 | 3 | 2.0 |
| 13 | R132. | 114 | 27 | 80 | 67 | 99 | 92 | 44 | 1 | 0 | 3.0 |
| 14 | R134. | 136 | 27 | 79 | 93 | 92 | 96 | 46 | 4 | 3 | 2.0 |
| 15 | R135. | 96 | 25 | 83 | 76 | 88 | 92 | 45 | 4 | 2 | 2.0 |
| 16 | R151. | 134 | 27 | 82 | 83 | 99 | 92 | 42 | 5 | 2 | 3.0 |
| 17 | R154. | 134 | 24 | 80 | 86 | 92 | 96 | 42 | 2 | 2 | 2.5 |
| 18 | R158. | 107 | 24 | 81 | 92 | 100 | 98 | 42 | 6 | 1 | 2.5 |
| 19 | R159. | 107 | 28 | 80 | 88 | 97 | 86 | 40 | 2 | 1 | 2.5 |
| 20 | R166. | 92 | 26 | 82 | 87 | 92 | 80 | 35 | 1 | 2 | 3.0 |
| 21 | R168. | 123 | 23 | 82 | 92 | 99 | 86 | 41 | 0 | 2 | 2.0 |
| 22 | R172. | 125 | 25 | 81 | 94 | 99 | 90 | 42 | 0 | 0 | 1.5 |
| 23 | R180. | 93 | 27 | 79 | 87 | 96 | 86 | 40 | 4 | 4 | 3.5 |
| 24 | R181. | 120 | 20 | 80 | 73 | 96 | 88 | 38 | 2 | 0 | 3.5 |
| 25 | R182. | 109 | 25 | 81 | 96 | 92 | 96 | 41 | 4 | 4 | 3.0 |
| 26 | R183. | 82 | 26 | 78 | 76 | 98 | 94 | 44 | 1 | 3 | 1.5 |
| 27 | R192. | 101 | 26 | 79 | 90 | 99 | 96 | 44 | 2 | 15 | 3.0 |
| 28 | R193. | 115 | 26 | 80 | 93 | 98 | 92 | 40 | 4 | 5 | 2.5 |
| 29 | R194. | 100 | 28 | 79 | 77 | 99 | 88 | 42 | 3 | 2 | 2.0 |
| 30 | R195. | 104 | 24 | 79 | 89 | 99 | 94 | 46 | 2 | 3 | 4.5 |
| 31 | R196. | 104 | 25 | 80 | 96 | 100 | 92 | 44 | 3 | 0 | 3.5 |
| 32 | R197. | 117 | 29 | 80 | 85 | 98 | 93 | 47 | 6 | 0 | 2.5 |
| 33 | R198. | 108 | 27 | 81 | 86 | 98 | 94 | 47 | 4 | 11 | 2.0 |
| | Average... | 109 | 26 | 80 | 87 | 96 | 91 | 42 | 3 | 4 | 2.7 |
| B—Single crosses | | | | | | | | | | | |
| 34 | WF9 × Oh43... | 108 | 27 | 81 | 94 | 98 | 87 | 39 | 6 | 3 | 2.5 |
| 35 | WF9 × B37... | 95 | 28 | 75 | 98 | 100 | 92 | 42 | 5 | 9 | 3.5 |
| 36 | B41 × Oh7A... | 71 | 32 | 74 | 56 | 94 | 94 | 51 | 1 | 1 | 4.0 |
| | Average... | 91 | 29 | 77 | 83 | 97 | 91 | 44 | 4 | 4 | 3.3 |
| C—Inbred lines crossed with (WF9 × B37) | | | | | | | | | | | |
| 1 | R71. | 103 | 29 | 75 | 99 | 89 | 94 | 48 | 4 | 2 | 4.0 |
| 2 | R74. | 95 | 29 | 76 | 100 | 69 | 93 | 45 | 3 | 7 | 2.5 |
| 3 | R74A. | 64 | 30 | 68 | 97 | 100 | 98 | 45 | 2 | 3 | 1.0 |
| 4 | R76. | 93 | 27 | 75 | 90 | 96 | 96 | 52 | 6 | 12 | 3.0 |
| 5 | R78. | 101 | 28 | 78 | 84 | 95 | 94 | 41 | 3 | 9 | 2.0 |
| 6 | R84. | 73 | 25 | 75 | 89 | 96 | 96 | 50 | 3 | 12 | 4.5 |
| 7 | R101. | 85 | 25 | 75 | 89 | 98 | 92 | 46 | 0 | 7 | 3.5 |
| 8 | R104. | 99 | 26 | 80 | 79 | 99 | 92 | 48 | 5 | 1 | 4.0 |
| 9 | R109B. | 103 | 27 | 77 | 99 | 97 | 94 | 46 | 2 | 4 | 2.5 |
| 10 | R112. | 109 | 26 | 80 | 98 | 100 | 90 | 48 | 6 | 6 | 2.5 |
| 11 | R113. | 106 | 24 | 76 | 93 | 100 | 91 | 50 | 2 | 1 | 3.0 |
| 12 | R114. | 107 | 28 | 76 | 99 | 99 | 98 | 48 | 1 | 2 | 2.5 |
| 13 | R132. | 101 | 25 | 77 | 56 | 95 | 94 | 46 | 2 | 3 | 4.0 |
| 14 | R134. | 108 | 28 | 74 | 94 | 95 | 96 | 46 | 10 | 8 | 2.0 |
| 15 | R135. | 92 | 25 | 77 | 83 | 79 | 96 | 52 | 6 | 6 | 1.5 |

(Table is continued on next page)

Table 3.—Continued

| Code | Entry | Acre yield | Mois-ture in grain | Shell-ing | Erect plants | Stand | Height | Dropped ears | Smut | Leaf blight |
|---|--------------|------------|--------------------|-----------|--------------|-------|--------|--------------|------|-------------|
| C — Inbred lines crossed with (WF9 × B37) — continued | | | | | | | | | | |
| 16 | R151..... | 130 | 29 | 79 | 91 | 99 | 98 | 53 | 6 | 0 |
| 17 | R154..... | 122 | 26 | 79 | 78 | 97 | 96 | 52 | 1 | 0 |
| 18 | R158..... | 91 | 25 | 77 | 90 | 89 | 98 | 48 | 5 | 3 |
| 19 | R159..... | 97 | 27 | 76 | 94 | 100 | 93 | 50 | 1 | 6 |
| 20 | R166..... | 98 | 26 | 80 | 90 | 97 | 92 | 46 | 2 | 10 |
| 21 | R168..... | 125 | 25 | 78 | 99 | 98 | 90 | 45 | 0 | 8 |
| 22 | R172..... | 107 | 26 | 76 | 95 | 100 | 92 | 49 | 1 | 1 |
| 23 | R180..... | 92 | 27 | 77 | 97 | 94 | 90 | 46 | 5 | 3 |
| 24 | R181..... | 123 | 23 | 76 | 89 | 100 | 94 | 45 | 2 | 2 |
| 25 | R182..... | 82 | 24 | 76 | 97 | 68 | 98 | 48 | 3 | 7 |
| 26 | R183..... | 56 | 29 | 75 | 98 | 98 | 96 | 51 | 0 | 1 |
| 27 | R192..... | 104 | 27 | 76 | 87 | 96 | 98 | 50 | 0 | 12 |
| 28 | R193..... | 96 | 28 | 76 | 91 | 100 | 94 | 47 | 4 | 3 |
| 29 | R194..... | 109 | 30 | 77 | 96 | 96 | 93 | 52 | 3 | 7 |
| 30 | R195..... | 103 | 24 | 76 | 91 | 98 | 92 | 50 | 3 | 8 |
| 31 | R196..... | 118 | 26 | 76 | 94 | 99 | 97 | 50 | 2 | 7 |
| 32 | R197..... | 125 | 31 | 77 | 78 | 98 | 95 | 52 | 2 | 5 |
| 33 | R198..... | 96 | 31 | 77 | 82 | 100 | 98 | 52 | 9 | 11 |
| | Average... | 100 | 27 | 76 | 90 | 95 | 94 | 48 | 3 | 5 |
| D — Single crosses | | | | | | | | | | |
| 34 | WF9×Oh43.... | 100 | 28 | 76 | 97 | 98 | 92 | 42 | 5 | 3 |
| 35 | WF9×B37.... | 85 | 28 | 74 | 99 | 96 | 90 | 48 | 4 | 15 |
| 36 | B41×Oh7A.... | 24 | 35 | 66 | 42 | 97 | 91 | 50 | 0 | 0 |
| | Average... | 70 | 30 | 72 | 79 | 97 | 91 | 47 | 3 | 6 |
| E — Inbred lines crossed with (B41 × Oh7A) | | | | | | | | | | |
| 1 | R71..... | 80 | 31 | 78 | 89 | 98 | 90 | 48 | 2 | 4 |
| 2 | R74..... | 119 | 28 | 77 | 92 | 99 | 92 | 49 | 1 | 2 |
| 3 | R74A..... | 25 | 30 | 75 | 96 | 100 | 92 | 50 | 4 | 12 |
| 4 | R76..... | 105 | 30 | 74 | 76 | 100 | 98 | 52 | 2 | 9 |
| 5 | R78..... | 63 | 31 | 77 | 59 | 100 | 92 | 50 | 0 | 8 |
| 6 | R84..... | 41 | 29 | 76 | 82 | 98 | 90 | 54 | 6 | 10 |
| 7 | R101..... | 79 | 26 | 77 | 80 | 99 | 91 | 50 | 3 | 3 |
| 8 | R104..... | 89 | 27 | 78 | 71 | 100 | 90 | 54 | 3 | 0 |
| 9 | R109B..... | 105 | 30 | 79 | 93 | 100 | 92 | 52 | 2 | 7 |
| 10 | R112..... | 91 | 28 | 78 | 95 | 99 | 92 | 45 | 3 | 10 |
| 11 | R113..... | 78 | 25 | 77 | 94 | 99 | 87 | 49 | 1 | 1 |
| 12 | R114..... | 98 | 27 | 75 | 90 | 98 | 97 | 52 | 4 | 2 |
| 13 | R132..... | 83 | 27 | 76 | 57 | 97 | 94 | 52 | 5 | 2 |
| 14 | R134..... | 97 | 30 | 80 | 85 | 100 | 93 | 49 | 13 | 3 |
| 15 | R135..... | 51 | 29 | 78 | 92 | 100 | 92 | 50 | 7 | 7 |
| 16 | R151..... | 122 | 28 | 79 | 75 | 100 | 97 | 52 | 8 | 2 |
| 17 | R154..... | 107 | 27 | 79 | 80 | 100 | 96 | 54 | 6 | 2 |
| 18 | R158..... | 92 | 27 | 78 | 93 | 94 | 96 | 51 | 3 | 0 |
| 19 | R159..... | 71 | 33 | 75 | 95 | 100 | 94 | 48 | 1 | 6 |
| 20 | R166..... | 68 | 29 | 76 | 60 | 100 | 84 | 46 | 1 | 3 |
| 21 | R168..... | 108 | 26 | 83 | 97 | 100 | 88 | 46 | 1 | 4 |
| 22 | R172..... | 95 | 26 | 78 | 86 | 99 | 94 | 54 | 1 | 5 |
| 23 | R180..... | 73 | 28 | 76 | 70 | 100 | 86 | 44 | 3 | 3 |
| 24 | R181..... | 117 | 23 | 76 | 73 | 100 | 92 | 48 | 1 | 3 |
| 25 | R182..... | 94 | 27 | 79 | 94 | 98 | 94 | 48 | 3 | 0 |
| 26 | R183..... | 70 | 28 | 77 | 95 | 96 | 92 | 54 | 4 | 2 |
| 27 | R192..... | 70 | 29 | 75 | 85 | 97 | 92 | 50 | 0 | 9 |
| 28 | R193..... | 87 | 27 | 75 | 86 | 100 | 91 | 46 | 6 | 1 |
| 29 | R194..... | 47 | 34 | 78 | 92 | 100 | 90 | 50 | 4 | 5 |
| 30 | R195..... | 76 | 27 | 75 | 98 | 99 | 91 | 52 | 3 | 3 |
| 31 | R196..... | 78 | 28 | 75 | 84 | 98 | 92 | 54 | 3 | 2 |
| 32 | R197..... | 106 | 30 | 77 | 84 | 100 | 92 | 52 | 2 | 0 |
| 33 | R198..... | 84 | 31 | 77 | 60 | 99 | 94 | 56 | 1 | 3 |
| | Average... | 84 | 28 | 77 | 84 | 99 | 92 | 50 | 3 | 4 |

(Table is concluded on next page)

Table 3.—Concluded

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut | Leaf blight |
|--|--------------|---------------|---------------------------|---------------|-----------------|-------|--------|-----|-----------------|------|----------------|
| | | | | | | | Plant | Ear | | | |
| F—Single crosses | | | | | | | | | | | |
| 34 | WF9×Oh43.... | 104 | 28 | 81 | 95 | 99 | 89 | 42 | 5 | 1 | 1.0 |
| 35 | WF9×B37.... | 72. | 27 | 74 | 94 | 100 | 92 | 47 | 1 | 10 | 2.0 |
| 36 | B41×Oh7A.... | 41 | 34 | 72 | 42 | 99 | 90 | 50 | 1 | 2 | 2.5 |
| | Average... | 72 | 30 | 76 | 77 | 99 | 90 | 46 | 2 | 4 | 1.8 |
| G—Mean of inbred lines crossed with three testers | | | | | | | | | | | |
| 1 | R71..... | 99 | 29 | 78 | 95 | 95 | 89 | 45 | 3 | 3 | 3.8 |
| 2 | R74..... | 104 | 28 | 78 | 95 | 88 | 91 | 43 | 1 | 4 | 2.2 |
| 3 | R74A..... | 60 | 29 | 73 | 97 | 99 | 92 | 44 | 2 | 8 | 1.3 |
| 4 | R76..... | 103 | 28 | 76 | 78 | 97 | 96 | 51 | 6 | 8 | 2.5 |
| 5 | R78..... | 93 | 29 | 79 | 77 | 96 | 91 | 44 | 2 | 7 | 2.2 |
| 6 | R84..... | 70 | 26 | 77 | 84 | 94 | 91 | 50 | 5 | 11 | 3.5 |
| 7 | R101..... | 90 | 25 | 77 | 87 | 98 | 91 | 45 | 1 | 6 | 3.8 |
| 8 | R104..... | 96 | 26 | 80 | 77 | 99 | 89 | 47 | 3 | 1 | 3.8 |
| 9 | R109B..... | 105 | 28 | 79 | 96 | 97 | 91 | 47 | 1 | 4 | 2.7 |
| 10 | R112..... | 105 | 26 | 80 | 96 | 98 | 92 | 44 | 5 | 9 | 2.0 |
| 11 | R113..... | 99 | 24 | 77 | 90 | 99 | 87 | 46 | 1 | 2 | 2.7 |
| 12 | R114..... | 104 | 26 | 77 | 93 | 97 | 98 | 47 | 1 | 3 | 2.2 |
| 13 | R132..... | 99 | 26 | 78 | 60 | 97 | 93 | 47 | 3 | 2 | 3.8 |
| 14 | R134..... | 114 | 28 | 78 | 91 | 96 | 95 | 47 | 9 | 5 | 1.8 |
| 15 | R135..... | 80 | 26 | 79 | 84 | 89 | 93 | 49 | 6 | 5 | 2.2 |
| 16 | R151..... | 129 | 28 | 80 | 83 | 99 | 96 | 49 | 6 | 1 | 2.5 |
| 17 | R154..... | 121 | 26 | 79 | 81 | 96 | 96 | 49 | 3 | 1 | 2.5 |
| 18 | R158..... | 97 | 25 | 79 | 92 | 94 | 97 | 47 | 5 | 1 | 3.5 |
| 19 | R159..... | 92 | 29 | 77 | 92 | 99 | 91 | 46 | 1 | 4 | 1.5 |
| 20 | R166..... | 86 | 27 | 79 | 79 | 96 | 85 | 42 | 1 | 5 | 2.8 |
| 21 | R168..... | 119 | 25 | 81 | 96 | 99 | 88 | 44 | 0 | 5 | 2.0 |
| 22 | R172..... | 109 | 26 | 78 | 92 | 99 | 92 | 48 | 1 | 2 | 1.3 |
| 23 | R180..... | 86 | 27 | 77 | 85 | 97 | 87 | 43 | 4 | 3 | 3.5 |
| 24 | R181..... | 120 | 22 | 77 | 78 | 99 | 91 | 44 | 2 | 2 | 3.2 |
| 25 | R182..... | 95 | 25 | 79 | 96 | 86 | 96 | 46 | 3 | 4 | 2.3 |
| 26 | R183..... | 69 | 28 | 77 | 90 | 97 | 94 | 50 | 2 | 2 | 1.5 |
| 27 | R192..... | 92 | 27 | 77 | 87 | 97 | 95 | 48 | 1 | 12 | 2.7 |
| 28 | R193..... | 99 | 27 | 77 | 90 | 99 | 92 | 44 | 5 | 3 | 2.5 |
| 29 | R194..... | 85 | 31 | 78 | 88 | 98 | 90 | 48 | 3 | 5 | 2.2 |
| 30 | R195..... | 94 | 25 | 77 | 93 | 98 | 92 | 49 | 3 | 5 | 3.7 |
| 31 | R196..... | 100 | 26 | 77 | 91 | 99 | 94 | 49 | 3 | 3 | 2.8 |
| 32 | R197..... | 116 | 30 | 78 | 82 | 99 | 93 | 50 | 3 | 2 | 2.5 |
| 33 | R198..... | 96 | 30 | 78 | 76 | 99 | 95 | 52 | 5 | 8 | 2.0 |
| | Average... | 98 | 27 | 78 | 87 | 97 | 92 | 47 | 3 | 4 | 2.6 |
| H—Mean of three single-cross testers | | | | | | | | | | | |
| 34 | WF9×Oh43.... | 104 | 28 | 79 | 95 | 98 | 89 | 41 | 5 | 2 | 1.8 |
| 35 | WF9×B37.... | 84 | 28 | 74 | 97 | 99 | 91 | 46 | 3 | 11 | 2.7 |
| 36 | B41×Oh7A.... | 45 | 34 | 71 | 47 | 97 | 92 | 50 | 1 | 1 | 3.5 |
| | Average... | 78 | 30 | 75 | 80 | 98 | 91 | 46 | 3 | 5 | 2.7 |

Table 4.—DOUBLE CROSSES OF ILLINOIS 21 MATURITY
Tested in North-Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|------------|---------------|---------------------------|---------------|-----------------|-----------|---------------|-----------------|------|
| A—Three-year averages, 1957-1959 | | | | | | | | | |
| 1 | Ill. 3042 | 125 | 23 | 80 | 92 | 94 | 46 | 1 | .. |
| 2 | Ill. 3026 | 123 | 22 | 80 | 89 | 96 | 41 | 1 | .. |
| 3 | Ill. 3022 | 122 | 20 | 81 | 89 | 92 | 44 | 1 | .. |
| 4 | Ill. 3029 | 120 | 21 | 80 | 91 | 93 | 42 | 0 | .. |
| 5 | Ill. 3010 | 119 | 21 | 80 | 86 | 97 | 47 | 2 | .. |
| 6 | AES 805 | 119 | 21 | 80 | 81 | 96 | 48 | 2 | .. |
| 7 | Ill. 3023A | 119 | 19 | 82 | 88 | 97 | 40 | 0 | .. |
| 8 | Ill. 3021 | 118 | 22 | 81 | 93 | 97 | 43 | 2 | .. |
| 9 | AES 703 | 118 | 20 | 80 | 93 | 93 | 43 | 0 | .. |
| 10 | Ill. 3160 | 117 | 20 | 82 | 96 | 96 | 44 | 0 | .. |
| 11 | Ill. 1968 | 116 | 19 | 83 | 86 | 94 | 46 | 0 | .. |
| 12 | Ill. 3032 | 116 | 20 | 81 | 87 | 95 | 42 | 1 | .. |
| 13 | Ill. 1332 | 115 | 19 | 81 | 80 | 95 | 48 | 1 | .. |
| 14 | Ill. 3039 | 115 | 21 | 79 | 91 | 97 | 43 | 1 | .. |
| 15 | Ill. 1971 | 114 | 20 | 83 | 83 | 96 | 46 | 1 | .. |
| 16 | Ill. 3017 | 114 | 21 | 80 | 93 | 95 | 44 | 1 | .. |
| 17 | Ill. 1969 | 113 | 20 | 82 | 93 | 96 | 47 | 1 | .. |
| 18 | Ill. 3020 | 112 | 20 | 80 | 91 | 99 | 40 | 1 | .. |
| 19 | Ill. 3043 | 111 | 20 | 82 | 93 | 96 | 45 | 2 | .. |
| 20 | Ill. 1921 | 110 | 23 | 79 | 89 | 93 | 48 | 1 | .. |
| 21 | Ill. 1966 | 110 | 20 | 79 | 82 | 93 | 46 | 1 | .. |
| 22 | AES 705 | 109 | 21 | 80 | 91 | 98 | 44 | 1 | .. |
| 23 | Ill. 3030 | 109 | 21 | 79 | 95 | 96 | 43 | 1 | .. |
| 24 | Ill. 21 | 108 | 21 | 81 | 76 | 93 | 48 | 2 | .. |
| 25 | Ill. 1928 | 108 | 23 | 79 | 87 | 92 | 52 | 1 | .. |
| 26 | Ill. 1831 | 107 | 22 | 81 | 86 | 94 | 42 | 1 | .. |
| 27 | AES 704 | 106 | 21 | 79 | 97 | 91 | 42 | 1 | .. |
| 28 | Ill. 1570 | 106 | 21 | 79 | 74 | 96 | 48 | 3 | .. |
| 29 | AES 702 | 105 | 21 | 79 | 80 | 92 | 45 | 1 | .. |
| 30 | Iowa 4297 | 98 | 21 | 80 | 78 | 96 | 45 | 2 | .. |
| Average... | | 113 | 21 | 80 | 88 | 95 | 45 | 1 | .. |
| B—Two-year averages, 1958-1959 | | | | | | | | | |
| 1 | Ill. 3042 | 124 | 22 | 82 | 92 | 97 | 47 | 1 | .. |
| 2 | Ill. 3022 | 124 | 20 | 82 | 92 | 95 | 46 | 1 | .. |
| 3 | Ill. 3029 | 122 | 21 | 82 | 92 | 96 | 44 | 0 | .. |
| 4 | Ill. 3026 | 121 | 21 | 81 | 92 | 96 | 44 | 2 | .. |
| 5 | Ill. 3015B | 120 | 20 | 82 | 94 | 95 | 46 | 4 | .. |
| 6 | Ill. 3021 | 119 | 20 | 82 | 93 | 99 | 44 | 2 | .. |
| 7 | Ill. 1968 | 118 | 18 | 84 | 90 | 97 | 46 | 0 | .. |
| 8 | AES 805 | 118 | 20 | 80 | 82 | 98 | 50 | 3 | .. |
| 9 | Ill. 3010 | 117 | 20 | 81 | 88 | 98 | 48 | 3 | .. |
| 10 | Ill. 3160 | 117 | 20 | 83 | 98 | 96 | 46 | 0 | .. |
| 11 | Ill. 3291 | 116 | 20 | 84 | 92 | 98 | 46 | 1 | .. |
| 12 | Ill. 3294 | 116 | 21 | 82 | 86 | 99 | 52 | 4 | .. |
| 13 | AES 703 | 116 | 20 | 80 | 94 | 94 | 46 | 0 | .. |
| 14 | Ill. 3023B | 116 | 21 | 82 | 90 | 98 | 44 | 1 | .. |
| 15 | Ill. 3023A | 116 | 19 | 83 | 88 | 98 | 42 | 0 | .. |
| 16 | Ill. 1969 | 114 | 20 | 83 | 92 | 98 | 48 | 2 | .. |
| 17 | Ill. 3039 | 114 | 20 | 79 | 92 | 99 | 44 | .. | .. |
| 18 | Ill. 3017 | 113 | 20 | 80 | 94 | 96 | 46 | 1 | .. |
| 19 | Ill. 3032 | 113 | 20 | 82 | 86 | 95 | 44 | 1 | .. |
| 20 | Ill. 1332 | 112 | 18 | 82 | 82 | 94 | 51 | 2 | .. |
| 21 | Iowa 4991 | 112 | 21 | 82 | 97 | 97 | 44 | 0 | .. |
| 22 | AES 705 | 111 | 20 | 80 | 92 | 98 | 46 | 2 | .. |

(Table is continued on next page)

Table 4.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---------------------|-------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
|---------------------|-------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|

B—Two-year averages, 1958-1959—concluded

| | | bu. | perct. | perct. | perct. | perct. | in. | perct. | perct. |
|----|------------|-----|--------|--------|--------|--------|-----|--------|--------|
| 23 | Ill. 1921 | 111 | 22 | 80 | 88 | 98 | 50 | 2 | .. |
| 24 | Ill. 1971 | 111 | 19 | 83 | 89 | 95 | 48 | 1 | .. |
| 25 | Ill. 3043 | 110 | 20 | 82 | 93 | 97 | 46 | 2 | .. |
| 26 | Ill. 1966 | 109 | 20 | 79 | 84 | 96 | 49 | 2 | .. |
| 27 | Ill. 3020 | 109 | 20 | 80 | 92 | 98 | 40 | 2 | .. |
| 28 | Iowa 4989 | 109 | 20 | 80 | 96 | 96 | 48 | 0 | .. |
| 29 | AES 704 | 108 | 20 | 79 | 98 | 96 | 44 | 2 | .. |
| 30 | Ill. 2249W | 108 | 20 | 81 | 82 | 97 | 52 | 12 | .. |
| 31 | Ill. 3030 | 108 | 20 | 80 | 95 | 96 | 44 | 1 | .. |
| 32 | Ill. 1831 | 107 | 22 | 82 | 88 | 96 | 44 | 2 | .. |
| 33 | AES 702 | 106 | 20 | 80 | 85 | 96 | 48 | 2 | .. |
| 34 | Ill. 6052 | 106 | 22 | 80 | 74 | 99 | 58 | 3 | .. |
| 35 | Ill. 21 | 104 | 20 | 81 | 74 | 95 | 50 | 2 | .. |
| 36 | Ill. 1570 | 104 | 20 | 80 | 78 | 98 | 49 | 5 | .. |
| 37 | Ill. 1928 | 104 | 22 | 80 | 88 | 94 | 54 | 1 | .. |
| 38 | Ill. 6021 | 104 | 20 | 82 | 81 | 96 | 58 | 6 | .. |
| 39 | Iowa 4297 | 98 | 20 | 80 | 80 | 94 | 47 | 3 | .. |
| | Average | 112 | 20 | 81 | 89 | 97 | 47 | 2 | .. |

C—1959 results (3 replications)

| | | | | | | | | | |
|----|------------|-----|----|----|----|----|----|---|----|
| 1 | Ill. 3182A | 118 | 24 | 83 | 69 | 97 | 46 | 3 | 1 |
| 2 | Ill. 3022 | 116 | 22 | 80 | 96 | 93 | 42 | 1 | 6 |
| 3 | Ill. 3042 | 115 | 24 | 82 | 96 | 95 | 43 | 0 | 4 |
| 4 | Ill. 3347 | 112 | 24 | 81 | 90 | 96 | 46 | 1 | 1 |
| 5 | Ill. 1968 | 109 | 20 | 84 | 92 | 94 | 42 | 1 | 5 |
| 6 | Ill. 3026 | 108 | 23 | 80 | 90 | 96 | 40 | 1 | 6 |
| 7 | Ill. 3321 | 108 | 21 | 81 | 90 | 96 | 44 | 1 | 8 |
| 8 | Ill. 3348 | 108 | 25 | 79 | 89 | 97 | 45 | 1 | 0 |
| 9 | Ill. 3029 | 107 | 22 | 81 | 98 | 92 | 43 | 1 | 2 |
| 10 | Ill. 3318 | 107 | 20 | 81 | 94 | 97 | 45 | 0 | 6 |
| 11 | U.S. 13 | 107 | 22 | 80 | 87 | 97 | 52 | 5 | 5 |
| 12 | Ill. 3021 | 106 | 22 | 81 | 95 | 98 | 41 | 3 | 12 |
| 13 | Ill. 3326A | 106 | 19 | 82 | 94 | 98 | 44 | 0 | 11 |
| 14 | Ill. 1969 | 105 | 21 | 81 | 93 | 96 | 46 | 1 | 1 |
| 15 | Ill. 3317 | 105 | 22 | 82 | 96 | 99 | 44 | 1 | 4 |
| 16 | Ill. 3345 | 105 | 24 | 82 | 90 | 97 | 47 | 3 | 1 |
| 17 | Ill. 3182B | 104 | 24 | 81 | 84 | 98 | 46 | 0 | 3 |
| 18 | Ill. 3314 | 104 | 22 | 83 | 86 | 97 | 48 | 1 | 3 |
| 19 | Ill. 3318A | 104 | 20 | 78 | 94 | 94 | 46 | 3 | 4 |
| 20 | Ill. 3326 | 104 | 22 | 80 | 91 | 95 | 43 | 0 | 5 |
| 21 | Ill. 3319 | 103 | 21 | 81 | 94 | 95 | 47 | 0 | 0 |
| 22 | Ill. 3323A | 103 | 20 | 79 | 95 | 97 | 42 | 0 | 1 |
| 23 | AES 703 | 102 | 22 | 80 | 94 | 94 | 42 | 1 | 4 |
| 24 | Ill. 3015B | 102 | 22 | 80 | 94 | 91 | 42 | 1 | 6 |
| 25 | Ill. 3160 | 102 | 21 | 82 | 96 | 95 | 44 | 0 | 4 |
| 26 | Iowa 4962 | 102 | 22 | 78 | 91 | 96 | 40 | 1 | 3 |
| 27 | Ill. 3023A | 101 | 21 | 82 | 90 | 97 | 39 | 0 | 1 |
| 28 | Ill. 3315 | 101 | 22 | 80 | 95 | 88 | 48 | 2 | 2 |
| 29 | Ill. 3291 | 100 | 23 | 83 | 97 | 96 | 44 | 0 | 12 |
| 30 | Ill. 3184A | 99 | 25 | 82 | 76 | 96 | 50 | 1 | 8 |
| 31 | Ill. 3322 | 99 | 21 | 81 | 92 | 96 | 43 | 0 | 4 |
| 32 | AES 702 | 98 | 22 | 79 | 93 | 94 | 45 | 2 | 1 |
| 33 | Ill. 1971 | 98 | 21 | 81 | 93 | 90 | 45 | 2 | 6 |
| 34 | Ill. 3010 | 98 | 22 | 80 | 89 | 95 | 43 | 4 | 6 |
| 35 | Ill. 3294 | 98 | 23 | 80 | 91 | 98 | 50 | 5 | 8 |
| 36 | Ill. 6109 | 98 | 21 | 77 | 92 | 94 | 46 | 1 | 4 |
| 37 | Ill. 3032 | 97 | 22 | 80 | 86 | 91 | 42 | 1 | 6 |
| 38 | Ill. 3039 | 96 | 22 | 77 | 94 | 99 | 40 | 2 | 4 |
| 39 | Ill. 3045A | 96 | 20 | 79 | 91 | 95 | 43 | 0 | 4 |
| 40 | Ill. 3017 | 95 | 21 | 79 | 97 | 92 | 44 | 1 | 5 |

(Table is concluded on next page)

Table 4.—Concluded

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| C—1959 results (3 replications)—concluded | | | | | | | | | |
| 41 | Ill. 3043 | 95 | 24 | 80 | 91 | 96 | 43 | 1 | 1 |
| 42 | Ill. 3323 | 95 | 21 | 79 | 94 | 99 | 44 | 0 | 4 |
| 43 | Ill. 6115 | 95 | 22 | 80 | 82 | 93 | 46 | 1 | 4 |
| 44 | Ill. 3023B | 94 | 24 | 81 | 92 | 97 | 40 | 2 | 7 |
| 45 | Ill. 3183A | 94 | 26 | 79 | 87 | 95 | 47 | 3 | 2 |
| 46 | Ill. 3315A | 94 | 22 | 79 | 94 | 95 | 45 | 1 | 1 |
| 47 | Ill. 3325A | 94 | 20 | 80 | 90 | 97 | 42 | 0 | 6 |
| 48 | Iowa 4991 | 94 | 24 | 81 | 98 | 94 | 40 | 0 | 5 |
| 49 | Ill. 2249W | 93 | 22 | 78 | 89 | 96 | 49 | 12 | 14 |
| 50 | Ill. 3020 | 93 | 22 | 79 | 96 | 97 | 38 | 1 | 8 |
| 51 | AES 705 | 92 | 22 | 79 | 98 | 95 | 43 | 1 | 3 |
| 52 | Ill. 1332 | 92 | 20 | 79 | 86 | 89 | 48 | 0 | 6 |
| 53 | Ill. 3011A | 92 | 21 | 78 | 98 | 97 | 41 | 1 | 7 |
| 54 | Ill. 3049 | 92 | 24 | 78 | 93 | 93 | 44 | 1 | 1 |
| 55 | Ill. 1921 | 91 | 24 | 79 | 86 | 95 | 46 | 3 | 4 |
| 56 | Ill. 3316 | 91 | 21 | 79 | 90 | 95 | 44 | 1 | 1 |
| 57 | Ill. 1966 | 89 | 22 | 75 | 87 | 95 | 47 | 2 | 6 |
| 58 | Ill. 3320 | 89 | 20 | 81 | 96 | 91 | 44 | 1 | 4 |
| 59 | AES 805 | 88 | 23 | 79 | 94 | 95 | 47 | 4 | 15 |
| 60 | Ill. 21 | 88 | 21 | 78 | 88 | 94 | 47 | 2 | 10 |
| 61 | Ill. 3030 | 87 | 22 | 77 | 97 | 94 | 40 | 0 | 3 |
| 62 | Ill. 6021 | 87 | 21 | 80 | 89 | 93 | 54 | 4 | 10 |
| 63 | Iowa 4989 | 86 | 24 | 79 | 95 | 95 | 45 | 0 | 6 |
| 64 | AES 704 | 85 | 22 | 76 | 98 | 93 | 41 | 1 | 3 |
| 65 | Ill. 1570 | 85 | 23 | 80 | 89 | 95 | 45 | 4 | 4 |
| 66 | Ill. 1928 | 84 | 25 | 79 | 91 | 90 | 48 | 2 | 9 |
| 67 | Ill. 3325 | 83 | 20 | 79 | 93 | 98 | 42 | 1 | 10 |
| 68 | Ill. 1831 | 81 | 25 | 80 | 91 | 93 | 38 | 2 | 12 |
| 69 | Ill. 6052 | 81 | 26 | 78 | 76 | 98 | 53 | 3 | 13 |
| 70 | Ill. 1996 | 79 | 24 | 77 | 92 | 91 | 46 | 2 | 1 |
| 71 | Iowa 4297 | 75 | 23 | 79 | 87 | 91 | 45 | 2 | 14 |
| 72 | Ill. 3044A | 72 | 21 | 78 | 94 | 95 | 40 | 1 | 4 |
| Average | | 97 | 22 | 80 | 91 | 95 | 44 | 2 | 5 |

Table 5.—THREE-WAY CROSSES AND STANDARDS
OF ILLINOIS 21 MATURITY
Tested in North-Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|----------------|------------|---------------------------|---------------|-----------------|-----------|---------------|-----------------|----------|
| A—Inbred lines crossed with (WF9 × B14) | | | | | | | | | |
| | | bu. | perct. | perct. | perct. | perct. | in. | perct. | perct. |
| 1 | R104..... | 84 | 22 | 83 | 94 | 95 | 39 | 1 | 0 |
| 2 | R135..... | 74 | 26 | 85 | 91 | 91 | 43 | 4 | 14 |
| 3 | R138..... | 101 | 23 | 82 | 90 | 94 | 43 | 0 | 6 |
| 4 | R195..... | 80 | 18 | 82 | 96 | 87 | 40 | 2 | 7 |
| 5 | H62..... | 94 | 26 | 81 | 93 | 89 | 39 | 2 | 0 |
| 6 | Ia57:1302..... | 94 | 22 | 82 | 75 | 93 | 43 | 0 | 1 |
| 7 | Ia57:1766..... | 69 | 25 | 82 | 96 | 89 | 44 | 1 | 12 |
| 8 | Oh26F..... | 89 | 18 | 84 | 95 | 96 | 41 | 4 | 3 |
| | Average..... | 86 | 23 | 83 | 91 | 92 | 42 | 2 | 5 |
| B—Inbred lines crossed with (B37 × Oh43) | | | | | | | | | |
| | | 73 | 21 | 86 | 93 | 91 | 38 | 1 | 3 |
| 9 | R104..... | 87 | 21 | 84 | 75 | 87 | 45 | 3 | 10 |
| 10 | R135..... | 104 | 22 | 81 | 90 | 95 | 43 | 2 | 6 |
| 11 | R138..... | 79 | 21 | 82 | 96 | 89 | 41 | 0 | 7 |
| 12 | R195..... | 94 | 25 | 82 | 91 | 94 | 39 | 0 | 2 |
| 13 | H62..... | 102 | 22 | 80 | 79 | 95 | 44 | 0 | 5 |
| 14 | Ia57:1302..... | 94 | 21 | 83 | 94 | 93 | 39 | 1 | 3 |
| | Average..... | 90 | 22 | 83 | 88 | 92 | 41 | 0 | 5 |
| C—Standard checks | | | | | | | | | |
| 19 | Ill. 3016..... | 103 | 20 | 80 | 94 | 93 | 37 | 0 | 3 |
| 17 | B37×Oh43..... | 100 | 25 | 79 | 99 | 96 | 36 | 0 | 4 |
| 16 | WF9×B14..... | 90 | 18 | 80 | 99 | 91 | 43 | 1 | 2 |
| 18 | AES 705..... | 88 | 20 | 79 | 97 | 92 | 39 | 0 | 4 |
| 20 | Ill. 3049..... | 85 | 23 | 81 | 88 | 98 | 46 | 0 | 1 |
| 21 | Ia. 4297..... | 85 | 20 | 85 | 92 | 92 | 40 | 1 | 10 |
| | Average..... | 92 | 21 | 81 | 95 | 94 | 40 | 0 | 4 |
| Average of 21 entries..... | | 89 | 22 | 82 | 91 | 92 | 41 | 2 | 5 |

Table 6.—DOUBLE CROSSES OF ILLINOIS 1570 MATURITY
Tested in Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|----------------|---------------|---------------------------|---------------|-----------------|-----------|---------------|-----------------|-----------|
| A—Three-year averages, 1957-1959 | | | | | | | | | |
| 1 | A 102... | 109 | 22 | 81 | 78 | 98 | 42 | 1 | 12 |
| 2 | Ill. 1976... | 109 | 21 | 80 | 85 | 96 | 45 | 0 | 9 |
| 3 | AES 810... | 107 | 19 | 81 | 91 | 96 | 42 | 1 | 12 |
| 4 | Ill. 3117... | 106 | 19 | 85 | 85 | 98 | 41 | 1 | 14 |
| 5 | Ill. 3093... | 105 | 19 | 81 | 89 | 98 | 42 | 2 | 8 |
| 6 | Ill. 1918... | 104 | 20 | 83 | 88 | 98 | 44 | 5 | 8 |
| 7 | Ill. 3080... | 103 | 20 | 80 | 83 | 98 | 43 | 1 | 6 |
| 8 | Ill. 1984... | 102 | 21 | 79 | 86 | 98 | 42 | 1 | 9 |
| 9 | Ill. 3055... | 102 | 19 | 82 | 90 | 98 | 43 | 0 | 10 |
| 10 | Ill. 3049... | 102 | 20 | 82 | 97 | 98 | 41 | 0 | 5 |
| 11 | Ill. 1332-3... | 102 | 21 | 82 | 88 | 97 | 43 | 1 | 13 |
| 12 | Ill. 1916... | 102 | 19 | 83 | 86 | 98 | 45 | 2 | 16 |
| 13 | Ill. 1926... | 101 | 19 | 80 | 94 | 96 | 43 | 2 | 7 |
| 14 | AES 809... | 100 | 21 | 82 | 91 | 95 | 38 | 1 | 13 |
| 15 | Ill. 1856... | 100 | 25 | 80 | 86 | 98 | 47 | 1 | 13 |
| 16 | Ill. 1922... | 100 | 21 | 81 | 93 | 98 | 41 | 0 | 8 |
| 17 | Ill. 1983... | 99 | 19 | 82 | 93 | 98 | 43 | 2 | 7 |
| 18 | Ill. 1989... | 99 | 19 | 80 | 92 | 96 | 39 | 1 | 7 |
| 19 | Ill. 3107... | 99 | 20 | 82 | 88 | 99 | 42 | 2 | 13 |
| 20 | Ill. 3121... | 99 | 19 | 83 | 88 | 97 | 40 | 1 | 5 |
| 21 | Ill. 1981... | 98 | 20 | 81 | 90 | 97 | 45 | 2 | 16 |
| 22 | Ill. 1987... | 98 | 20 | 77 | 87 | 98 | 43 | 2 | 8 |
| 23 | Ill. 3115... | 98 | 17 | 82 | 88 | 98 | 43 | 2 | 18 |
| 24 | Ill. 3119... | 98 | 21 | 82 | 84 | 99 | 42 | 1 | 7 |
| 25 | Ill. 1332-4... | 98 | 19 | 82 | 89 | 97 | 42 | 1 | 8 |
| 26 | Ill. 1996... | 98 | 20 | 77 | 92 | 97 | 43 | 1 | 10 |
| 27 | Ill. 1813... | 98 | 21 | 81 | 96 | 95 | 43 | 2 | 9 |
| 28 | Ill. 1880... | 98 | 19 | 83 | 89 | 98 | 42 | 2 | 7 |
| 29 | Ill. 1921... | 98 | 20 | 80 | 94 | 98 | 41 | 1 | 12 |
| 30 | Ill. 3124... | 98 | 21 | 80 | 95 | 99 | 42 | 1 | 7 |
| 31 | Ill. 3092... | 97 | 20 | 81 | 91 | 97 | 43 | 2 | 10 |
| 32 | Ill. 3074... | 97 | 21 | 83 | 92 | 99 | 42 | 0 | 9 |
| 33 | AES 702... | 97 | 20 | 80 | 88 | 99 | 40 | 2 | 12 |
| 34 | Ill. 1944... | 97 | 21 | 79 | 90 | 94 | 47 | 0 | 11 |
| 35 | Ill. 1994... | 97 | 21 | 78 | 91 | 97 | 41 | 1 | 11 |
| 36 | Ill. 1332... | 97 | 20 | 82 | 93 | 97 | 42 | 2 | 16 |
| 37 | Ill. 3075... | 97 | 20 | 83 | 89 | 99 | 43 | 1 | 7 |
| 38 | U.S. 13... | 97 | 19 | 80 | 81 | 95 | 46 | 4 | 10 |
| 39 | Ill. 1928... | 97 | 21 | 81 | 90 | 96 | 45 | 1 | 17 |
| 40 | Ill. 1919... | 96 | 19 | 80 | 85 | 98 | 42 | 3 | 11 |
| 41 | Ill. 3104... | 96 | 19 | 80 | 88 | 98 | 40 | 2 | 13 |
| 42 | Ill. 21... | 96 | 19 | 82 | 89 | 98 | 42 | 2 | 10 |
| 43 | Ill. 1978... | 95 | 21 | 77 | 83 | 98 | 45 | 2 | 10 |
| 44 | Ill. 1893... | 95 | 20 | 80 | 89 | 94 | 46 | 2 | 17 |
| 45 | Ill. 1992... | 95 | 22 | 78 | 92 | 95 | 43 | 0 | 11 |
| 46 | Ill. 3151... | 95 | 19 | 80 | 92 | 97 | 43 | 1 | 16 |
| 47 | Ill. 1570... | 95 | 20 | 80 | 81 | 97 | 43 | 2 | 10 |
| 48 | Ill. 1851... | 94 | 22 | 77 | 88 | 95 | 47 | 1 | 15 |
| 49 | AES 805... | 93 | 20 | 79 | 92 | 97 | 42 | 1 | 23 |
| 50 | Ill. 1890... | 93 | 19 | 81 | 89 | 94 | 42 | 0 | 18 |
| | Average... | | 99 | 20 | 81 | 89 | 97 | 43 | 11 |

(Table is continued on next page)

Table 6.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---------------------------------------|-------------|---------------|---------------------------|---------------|-----------------|--------|---------------|-----------------|--------|
| B—Two-year averages, 1958-1959 | | | | | | | | | |
| | | bu. | perct. | perct. | perct. | perct. | in. | perct. | perct. |
| 1 | Ill. 3183 | 109 | 20 | 82 | 89 | 96 | 38 | 2 | 10 |
| 2 | Ill. 3186 | 108 | 19 | 84 | 86 | 98 | 42 | 2 | 12 |
| 3 | Ill. 1976 | 107 | 20 | 82 | 90 | 98 | 42 | 0 | 12 |
| 4 | A 102 | 105 | 19 | 83 | 77 | 98 | 41 | 1 | 17 |
| 5 | Ill. 3080 | 104 | 18 | 82 | 84 | 98 | 41 | 2 | 8 |
| 6 | Ill. 3117 | 104 | 17 | 86 | 89 | 98 | 40 | 2 | 19 |
| 7 | AES 810 | 102 | 18 | 82 | 94 | 95 | 40 | 2 | 17 |
| 8 | Ill. 1918 | 101 | 20 | 84 | 91 | 98 | 42 | 7 | 12 |
| 9 | Ill. 3093 | 100 | 18 | 82 | 88 | 98 | 40 | 2 | 12 |
| 10 | Ill. 1926 | 100 | 18 | 82 | 96 | 97 | 40 | 2 | 10 |
| 11 | Ill. 1984 | 100 | 18 | 80 | 91 | 98 | 40 | 2 | 14 |
| 12 | Ill. 3055 | 100 | 18 | 82 | 93 | 98 | 43 | 0 | 16 |
| 13 | Ill. 3074 | 100 | 20 | 85 | 93 | 99 | 40 | 0 | 13 |
| 14 | Ill. 1916 | 99 | 17 | 85 | 88 | 98 | 44 | 4 | 20 |
| 15 | Ill. 1989 | 99 | 18 | 82 | 93 | 98 | 38 | 1 | 10 |
| 16 | Iowa 5115 | 98 | 19 | 80 | 92 | 98 | 40 | 0 | 6 |
| 17 | AES 809 | 98 | 20 | 84 | 90 | 97 | 34 | 1 | 19 |
| 18 | Ill. 1987 | 98 | 19 | 78 | 89 | 100 | 42 | 3 | 12 |
| 19 | Ill. 1922 | 97 | 20 | 84 | 94 | 98 | 38 | 0 | 11 |
| 20 | Ill. 3151 | 96 | 18 | 83 | 95 | 98 | 42 | 2 | 24 |
| 21 | Ill. 3049 | 96 | 20 | 83 | 98 | 100 | 38 | 0 | 8 |
| 22 | Ill. 3119 | 96 | 18 | 84 | 84 | 98 | 42 | 2 | 10 |
| 23 | Ill. 3121 | 96 | 18 | 84 | 84 | 96 | 38 | 1 | 6 |
| 24 | Ill. 1856 | 96 | 21 | 81 | 92 | 98 | 44 | 2 | 19 |
| 25 | Ill. 3075 | 95 | 18 | 84 | 88 | 98 | 40 | 1 | 10 |
| 26 | U.S. 13 | 95 | 19 | 82 | 84 | 97 | 44 | 6 | 14 |
| 27 | AES 705 | 94 | 18 | 84 | 94 | 98 | 36 | 1 | 16 |
| 28 | Ill. 1992 | 94 | 20 | 81 | 92 | 95 | 40 | 0 | 16 |
| 29 | Ill. 1996 | 94 | 18 | 78 | 94 | 97 | 40 | 1 | 14 |
| 30 | Ill. 1983 | 94 | 18 | 82 | 95 | 98 | 41 | 2 | 10 |
| 31 | Ill. 1570 | 94 | 18 | 82 | 92 | 96 | 42 | 3 | 14 |
| 32 | Ill. 1994 | 94 | 19 | 80 | 90 | 98 | 40 | 2 | 16 |
| 33 | Ill. 1332-3 | 93 | 20 | 84 | 90 | 96 | 40 | 2 | 19 |
| 34 | Ill. 1332-4 | 93 | 18 | 84 | 94 | 95 | 40 | 2 | 12 |
| 35 | Ill. 1813 | 93 | 20 | 82 | 96 | 94 | 42 | 2 | 14 |
| 36 | Ill. 21 | 93 | 18 | 82 | 94 | 98 | 43 | 4 | 15 |
| 37 | Ill. 3107 | 93 | 19 | 84 | 91 | 100 | 41 | 3 | 19 |
| 38 | Ill. 1944 | 92 | 20 | 82 | 88 | 92 | 46 | 0 | 15 |
| 39 | Ill. 1919 | 92 | 18 | 81 | 90 | 97 | 40 | 5 | 24 |
| 40 | Ill. 3115 | 92 | 16 | 84 | 93 | 98 | 42 | 2 | 25 |
| 41 | Ill. 3124 | 91 | 20 | 82 | 96 | 100 | 40 | 2 | 10 |
| 42 | Ill. 1880 | 90 | 18 | 84 | 93 | 98 | 41 | 2 | 10 |
| 43 | Ill. 1981 | 90 | 18 | 83 | 92 | 97 | 43 | 2 | 22 |
| 44 | Ill. 1332 | 90 | 18 | 84 | 97 | 99 | 42 | 2 | 24 |
| 45 | Ill. 1893 | 90 | 18 | 82 | 92 | 96 | 43 | 4 | 25 |
| 46 | Ill. 1921 | 90 | 19 | 80 | 98 | 98 | 39 | 2 | 18 |
| 47 | AES 702 | 89 | 18 | 82 | 91 | 99 | 37 | 2 | 18 |
| 48 | Ill. 3104 | 88 | 18 | 80 | 93 | 98 | 38 | 3 | 19 |
| 49 | Ill. 1928 | 87 | 20 | 82 | 92 | 96 | 41 | 2 | 24 |
| 50 | Ill. 3092 | 87 | 18 | 82 | 91 | 96 | 40 | 3 | 14 |
| 51 | Ill. 1851 | 86 | 20 | 78 | 86 | 94 | 46 | 1 | 22 |
| 52 | Ill. 1978 | 86 | 20 | 79 | 86 | 98 | 45 | 2 | 15 |
| 53 | Ill. 6021 | 86 | 19 | 80 | 86 | 98 | 49 | 5 | 24 |
| 54 | Ill. 6052 | 83 | 19 | 84 | 78 | 92 | 48 | 3 | 22 |
| 55 | AES 805 | 83 | 19 | 80 | 93 | 98 | 40 | 1 | 34 |
| 56 | Ill. 1890 | 83 | 19 | 80 | 92 | 92 | 41 | 0 | 26 |
| | Average | 95 | 19 | 82 | 91 | 97 | 41 | 2 | 16 |

(Table is continued on next page)

Table 6.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| C—1959 results (3 replications) | | | | | | | | | |
| 1 | Ill. 3343 | 106 | 20 | 83 | 92 | 100 | 37 | 1 | 6 |
| 2 | Ill. 3346 | 106 | 21 | 85 | 86 | 99 | 39 | 1 | 9 |
| 3 | Ill. 3347 | 104 | 18 | 84 | 92 | 95 | 33 | 1 | 9 |
| 4 | Ill. 3350 | 103 | 22 | 80 | 87 | 99 | 37 | 1 | 6 |
| 5 | Ill. 3332A | 100 | 19 | 85 | 84 | 98 | 35 | 0 | 8 |
| 6 | Ill. 3244 | 99 | 19 | 84 | 84 | 98 | 34 | 1 | 16 |
| 7 | Ill. 3349 | 99 | 20 | 79 | 81 | 97 | 38 | 1 | 11 |
| 8 | A104 | 99 | 19 | 80 | 74 | 96 | 36 | 1 | 11 |
| 9 | Ill. 3334 | 98 | 19 | 85 | 79 | 98 | 35 | 1 | 6 |
| 10 | Ill. 3353 | 98 | 21 | 82 | 89 | 95 | 34 | 1 | 6 |
| 11 | Ill. 3357 | 98 | 21 | 82 | 91 | 97 | 30 | 0 | 8 |
| 12 | Ill. 3329 | 96 | 18 | 83 | 90 | 100 | 34 | 1 | 5 |
| 13 | Ill. 3377 | 96 | 18 | 84 | 92 | 99 | 36 | 3 | 19 |
| 14 | Ill. 1976 | 95 | 19 | 81 | 92 | 98 | 36 | 0 | 21 |
| 15 | A110 | 95 | 20 | 84 | 74 | 92 | 36 | 1 | 5 |
| 16 | Ill. 3354 | 93 | 23 | 78 | 76 | 99 | 37 | 2 | 8 |
| 17 | Ill. 1918 | 92 | 20 | 83 | 92 | 95 | 35 | 12 | 21 |
| 18 | Ill. 3248 | 92 | 19 | 82 | 79 | 99 | 33 | 3 | 12 |
| 19 | Ill. 3344 | 92 | 24 | 83 | 94 | 97 | 37 | 1 | 7 |
| 20 | Ill. 3359 | 92 | 20 | 80 | 84 | 97 | 33 | 2 | 12 |
| 21 | Ill. 3378 | 92 | 19 | 86 | 84 | 99 | 36 | 2 | 17 |
| 22 | Ill. 3277 | 91 | 19 | 81 | 84 | 97 | 35 | 0 | 14 |
| 23 | Ill. 3348 | 90 | 21 | 84 | 92 | 99 | 36 | 0 | 6 |
| 24 | Ill. 3328 | 89 | 19 | 83 | 85 | 98 | 34 | 1 | 7 |
| 25 | Ill. 3330 | 89 | 19 | 84 | 89 | 98 | 36 | 1 | 8 |
| 26 | Ill. 3351 | 89 | 20 | 85 | 88 | 100 | 39 | 1 | 6 |
| 27 | Ill. 3372 | 89 | 20 | 83 | 87 | 99 | 36 | 3 | 18 |
| 28 | Ill. 3080 | 88 | 18 | 82 | 78 | 99 | 36 | 1 | 15 |
| 29 | Ill. 3183 | 88 | 21 | 79 | 84 | 94 | 32 | 1 | 15 |
| 30 | Ill. 3186 | 88 | 19 | 84 | 84 | 96 | 36 | 3 | 21 |
| 31 | AES 810 | 87 | 18 | 80 | 92 | 99 | 33 | 3 | 27 |
| 32 | Ill. 3332 | 87 | 19 | 82 | 73 | 95 | 34 | 2 | 5 |
| 33 | Ill. 3374 | 87 | 18 | 80 | 96 | 94 | 35 | 4 | 16 |
| 34 | Ill. 1926 | 86 | 19 | 80 | 95 | 97 | 34 | 3 | 17 |
| 35 | Ill. 3117 | 86 | 17 | 85 | 89 | 99 | 34 | 2 | 28 |
| 36 | Ill. 3240A | 85 | 22 | 82 | 93 | 97 | 35 | 3 | 32 |
| 37 | Ill. 3247 | 85 | 19 | 82 | 73 | 97 | 37 | 1 | 14 |
| 38 | Ill. 3259B | 85 | 18 | 81 | 78 | 98 | 31 | 0 | 15 |
| 39 | Ill. 3333 | 85 | 19 | 84 | 80 | 95 | 34 | 3 | 9 |
| 40 | A102 | 85 | 19 | 82 | 75 | 99 | 33 | 1 | 22 |
| 41 | Ill. 3183A | 84 | 21 | 81 | 89 | 96 | 36 | 3 | 20 |
| 42 | Ill. 3281 | 84 | 18 | 82 | 89 | 98 | 37 | 2 | 24 |
| 43 | Ill. 3184A | 83 | 20 | 83 | 77 | 99 | 36 | 5 | 26 |
| 44 | Ill. 3362 | 83 | 21 | 83 | 88 | 97 | 35 | 1 | 15 |
| 45 | Ill. 3373 | 83 | 18 | 82 | 91 | 99 | 32 | 5 | 19 |
| 46 | Ill. 3055 | 82 | 18 | 81 | 96 | 99 | 39 | 0 | 26 |
| 47 | Ill. 3238 | 82 | 20 | 83 | 91 | 99 | 34 | 1 | 25 |
| 48 | Ill. 3074 | 81 | 20 | 84 | 89 | 98 | 34 | 1 | 17 |
| 49 | Ill. 3237A | 81 | 18 | 84 | 84 | 98 | 34 | 1 | 16 |
| 50 | Ill. 3242 | 81 | 20 | 82 | 88 | 95 | 34 | 0 | 15 |
| 51 | Ill. 3093 | 80 | 17 | 83 | 86 | 97 | 34 | 2 | 25 |
| 52 | Ill. 3222 | 80 | 18 | 83 | 90 | 99 | 34 | 2 | 10 |
| 53 | Ill. 3236 | 80 | 23 | 85 | 82 | 93 | 36 | 0 | 19 |
| 54 | Ill. 3345 | 80 | 22 | 80 | 90 | 98 | 37 | 2 | 6 |
| 55 | Ill. 3355 | 80 | 20 | 81 | 95 | 96 | 31 | 1 | 10 |
| 56 | A109 | 80 | 19 | 81 | 87 | 96 | 36 | 3 | 25 |
| 57 | Ill. 3237 | 79 | 19 | 81 | 86 | 100 | 30 | 2 | 11 |
| 58 | Ill. 3249 | 79 | 20 | 83 | 82 | 97 | 33 | 5 | 16 |
| 59 | Ill. 3367 | 79 | 20 | 81 | 91 | 99 | 33 | 0 | 13 |
| 60 | U.S. 13 | 79 | 19 | 81 | 88 | 99 | 39 | 8 | 27 |
| 61 | Ill. 1989 | 78 | 18 | 82 | 92 | 98 | 33 | 0 | 18 |
| 62 | Ill. 3182A | 78 | 22 | 83 | 81 | 99 | 34 | 1 | 19 |
| 63 | Ill. 3342 | 78 | 17 | 84 | 82 | 99 | 34 | 2 | 14 |
| 64 | Ill. 3358 | 78 | 19 | 83 | 87 | 88 | 32 | 1 | 13 |
| 65 | Ill. 3360 | 78 | 20 | 81 | 86 | 99 | 34 | 1 | 16 |

(Table is continued on next page)

Table 6.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|------------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| C—1959 results (3 replications) —continued | | | | | | | | | |
| 66 | Ill. 3384..... | 78 | 20 | 83 | 93 | 94 | 33 | 1 | 22 |
| 67 | Ill. 3121..... | 77 | 18 | 84 | 72 | 98 | 32 | 2 | 10 |
| 68 | Ill. 3239..... | 77 | 19 | 83 | 85 | 99 | 34 | 0 | 17 |
| 69 | Ill. 3356..... | 77 | 20 | 80 | 82 | 95 | 33 | 2 | 10 |
| 70 | Ill. 3259A..... | 76 | 20 | 83 | 82 | 99 | 34 | 1 | 13 |
| 71 | Ill. 3331..... | 76 | 19 | 84 | 89 | 95 | 36 | 5 | 20 |
| 72 | Iowa 5018..... | 76 | 19 | 80 | 91 | 98 | 32 | 3 | 21 |
| 73 | AES 809..... | 75 | 20 | 82 | 89 | 97 | 31 | 1 | 34 |
| 74 | Ill. 1916..... | 75 | 18 | 84 | 89 | 97 | 37 | 6 | 33 |
| 75 | Ill. 1987..... | 75 | 18 | 74 | 89 | 99 | 36 | 2 | 21 |
| 76 | Ill. 3102..... | 75 | 18 | 80 | 95 | 92 | 34 | 1 | 32 |
| 77 | Ill. 3254..... | 75 | 19 | 80 | 93 | 97 | 30 | 0 | 9 |
| 78 | Ill. 3280..... | 75 | 19 | 79 | 95 | 96 | 34 | 1 | 28 |
| 79 | Ill. 3368..... | 75 | 18 | 83 | 95 | 99 | 37 | 3 | 18 |
| 80 | Ill. 1570..... | 74 | 18 | 81 | 95 | 99 | 37 | 5 | 23 |
| 81 | Ill. 1922..... | 74 | 20 | 84 | 92 | 99 | 35 | 1 | 18 |
| 82 | Ill. 1984..... | 74 | 18 | 80 | 91 | 97 | 35 | 1 | 26 |
| 83 | Ill. 3124..... | 74 | 20 | 82 | 94 | 100 | 36 | 3 | 18 |
| 84 | Ill. 3256..... | 74 | 19 | 84 | 90 | 97 | 34 | 1 | 19 |
| 85 | Ill. 3259..... | 74 | 20 | 82 | 86 | 98 | 30 | 1 | 12 |
| 86 | Ill. 3119..... | 73 | 18 | 83 | 74 | 97 | 35 | 3 | 12 |
| 87 | Ill. 3232..... | 73 | 17 | 81 | 94 | 98 | 34 | 3 | 20 |
| 88 | Ill. 3361..... | 73 | 19 | 81 | 87 | 95 | 35 | 2 | 14 |
| 89 | Ill. 1856..... | 72 | 22 | 79 | 94 | 97 | 34 | 2 | 28 |
| 90 | Ill. 3253..... | 72 | 22 | 83 | 81 | 99 | 30 | 1 | 8 |
| 91 | Ill. 3371..... | 72 | 18 | 81 | 96 | 95 | 39 | 1 | 26 |
| 92 | Ill. 3375..... | 72 | 20 | 85 | 90 | 100 | 39 | 2 | 26 |
| 93 | U.S. 523W..... | 72 | 24 | 78 | 77 | 98 | 38 | 2 | 23 |
| 94 | Ill. 1944..... | 71 | 19 | 82 | 81 | 89 | 40 | 1 | 15 |
| 95 | Ill. 1994..... | 71 | 19 | 79 | 90 | 98 | 33 | 2 | 29 |
| 96 | Ill. 1996..... | 71 | 18 | 72 | 93 | 99 | 34 | 1 | 28 |
| 97 | Ill. 3220..... | 71 | 20 | 82 | 95 | 98 | 35 | 1 | 25 |
| 98 | Ill. 3276..... | 71 | 21 | 74 | 94 | 98 | 36 | 1 | 15 |
| 99 | Ill. 3279..... | 71 | 21 | 82 | 98 | 99 | 34 | 5 | 36 |
| 100 | Ill. 3370..... | 71 | 19 | 79 | 97 | 96 | 34 | 6 | 26 |
| 101 | Iowa 5115..... | 71 | 19 | 77 | 93 | 97 | 34 | 1 | 11 |
| 102 | Ill. 21..... | 70 | 18 | 82 | 98 | 96 | 37 | 4 | 25 |
| 103 | Ill. 1880..... | 70 | 18 | 84 | 95 | 97 | 35 | 2 | 16 |
| 104 | Ill. 1983..... | 70 | 17 | 80 | 98 | 97 | 35 | 3 | 19 |
| 105 | Ill. 3049..... | 70 | 20 | 83 | 98 | 99 | 35 | 1 | 12 |
| 106 | Ill. 3182B..... | 70 | 20 | 81 | 89 | 95 | 34 | 2 | 18 |
| 107 | Ill. 3221..... | 70 | 20 | 84 | 89 | 97 | 36 | 0 | 36 |
| 108 | Ill. 1332-4..... | 69 | 17 | 84 | 94 | 95 | 33 | 2 | 16 |
| 109 | Ill. 3278..... | 69 | 19 | 79 | 89 | 97 | 36 | 4 | 24 |
| 110 | Iowa 5040..... | 69 | 19 | 80 | 92 | 99 | 35 | 1 | 19 |
| 111 | Ill. 3011A..... | 68 | 17 | 80 | 94 | 99 | 32 | 1 | 34 |
| 112 | Ill. 3075..... | 68 | 19 | 82 | 84 | 98 | 34 | 0 | 14 |
| 113 | Ill. 3225..... | 68 | 21 | 83 | 96 | 97 | 35 | 2 | 28 |
| 114 | Ill. 3246..... | 68 | 22 | 68 | 76 | 96 | 37 | 2 | 20 |
| 115 | Ill. 1851..... | 67 | 20 | 77 | 96 | 99 | 37 | 1 | 40 |
| 116 | Ill. 1992..... | 67 | 19 | 80 | 95 | 96 | 34 | 1 | 31 |
| 117 | Ill. 3092..... | 67 | 17 | 83 | 93 | 98 | 35 | 2 | 24 |
| 118 | Ill. 3151..... | 67 | 18 | 81 | 97 | 98 | 35 | 1 | 41 |
| 119 | Ill. 3227..... | 67 | 18 | 80 | 95 | 98 | 36 | 3 | 22 |
| 120 | Ill. 3364..... | 67 | 22 | 81 | 91 | 95 | 37 | 0 | 17 |
| 121 | AES 702..... | 66 | 17 | 82 | 86 | 99 | 33 | 3 | 35 |
| 122 | Ill. 1332-3..... | 66 | 19 | 85 | 92 | 99 | 35 | 3 | 34 |
| 123 | Ill. 3255..... | 66 | 19 | 81 | 88 | 99 | 33 | 1 | 11 |
| 124 | Ill. 3257..... | 66 | 19 | 82 | 91 | 97 | 32 | 0 | 19 |
| 125 | AES 705..... | 65 | 18 | 82 | 96 | 97 | 31 | 0 | 26 |
| 126 | Ill. 3260..... | 65 | 18 | 79 | 81 | 97 | 33 | 1 | 32 |
| 127 | Ill. 3369..... | 65 | 18 | 80 | 94 | 98 | 34 | 2 | 29 |
| 128 | Ill. 1813..... | 64 | 20 | 81 | 95 | 99 | 37 | 3 | 28 |
| 129 | Ill. 1893..... | 64 | 19 | 80 | 93 | 97 | 35 | 3 | 44 |
| 130 | Ill. 3235..... | 64 | 17 | 80 | 98 | 97 | 36 | 8 | 32 |

(Table is concluded on next page)

Table 6.—Concluded

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| C—1959 results (3 replications) — concluded | | | | | | | | | |
| 131 | Ill. 3241 | 64 | 21 | 82 | 83 | 98 | 39 | 3 | 27 |
| 132 | Ill. 3284 | 64 | 19 | 83 | 95 | 94 | 35 | 2 | 26 |
| 133 | Ill. 3376 | 64 | 19 | 80 | 95 | 99 | 36 | 2 | 22 |
| 134 | Ill. 3365 | 63 | 18 | 81 | 95 | 97 | 35 | 3 | 26 |
| 135 | Ill. 1928 | 62 | 22 | 80 | 94 | 95 | 35 | 1 | 44 |
| 136 | Ill. 1981 | 62 | 19 | 82 | 98 | 97 | 36 | 3 | 40 |
| 137 | Ill. 3115 | 62 | 17 | 81 | 93 | 97 | 34 | 3 | 44 |
| 138 | Ill. 3230 | 62 | 19 | 82 | 96 | 100 | 32 | 3 | 38 |
| 139 | Ill. 3240 | 62 | 21 | 82 | 91 | 98 | 34 | 1 | 37 |
| 140 | Ill. 3260A | 62 | 18 | 81 | 79 | 100 | 33 | 0 | 35 |
| 141 | Ill. 6021 | 62 | 20 | 77 | 91 | 98 | 42 | 5 | 47 |
| 142 | Ill. 3218 | 61 | 19 | 82 | 98 | 98 | 32 | 3 | 22 |
| 143 | Ill. 3258 | 61 | 18 | 82 | 89 | 91 | 30 | 0 | 20 |
| 144 | Ill. 3264 | 61 | 17 | 81 | 83 | 96 | 34 | 1 | 24 |
| 145 | Ill. 1919 | 60 | 19 | 77 | 93 | 99 | 33 | 5 | 36 |
| 146 | Ill. 3226 | 60 | 18 | 81 | 98 | 97 | 35 | 1 | 32 |
| 147 | Ill. 3283 | 60 | 18 | 79 | 92 | 99 | 34 | 0 | 35 |
| 148 | Ill. 6109 | 60 | 18 | 80 | 90 | 96 | 33 | 2 | 40 |
| 149 | Ill. 6115 | 60 | 18 | 79 | 96 | 98 | 36 | 3 | 38 |
| 150 | Ill. 1332 | 59 | 18 | 81 | 100 | 100 | 35 | 4 | 44 |
| 151 | Ill. 3107 | 59 | 19 | 82 | 97 | 99 | 34 | 4 | 29 |
| 152 | Ill. 3223 | 59 | 21 | 82 | 99 | 97 | 33 | 0 | 24 |
| 153 | Ill. 3224 | 59 | 19 | 81 | 100 | 97 | 36 | 4 | 37 |
| 154 | Ill. 3285 | 59 | 18 | 79 | 92 | 98 | 34 | 1 | 44 |
| 155 | Ill. 3233 | 58 | 18 | 80 | 99 | 98 | 33 | 10 | 33 |
| 156 | Ill. 3234 | 58 | 19 | 80 | 95 | 97 | 38 | 7 | 29 |
| 157 | Ill. 3282 | 58 | 19 | 76 | 96 | 95 | 33 | 1 | 43 |
| 158 | Ill. 6052 | 57 | 20 | 84 | 82 | 93 | 37 | 3 | 42 |
| 159 | Ill. 3229 | 56 | 19 | 81 | 100 | 99 | 32 | 2 | 30 |
| 160 | Ill. 1890 | 55 | 19 | 78 | 92 | 93 | 36 | 0 | 46 |
| 161 | Ill. 1921 | 54 | 20 | 78 | 98 | 98 | 32 | 4 | 29 |
| 162 | Ill. 1978 | 54 | 20 | 75 | 98 | 97 | 35 | 4 | 30 |
| 163 | Ill. 3219 | 54 | 19 | 82 | 98 | 99 | 33 | 1 | 33 |
| 164 | Ill. 3228 | 53 | 18 | 83 | 97 | 97 | 31 | 3 | 39 |
| 165 | Ill. 6062 | 51 | 18 | 79 | 94 | 97 | 35 | 4 | 49 |
| 166 | Ill. 3217 | 50 | 19 | 81 | 99 | 100 | 35 | 2 | 23 |
| 167 | AES 805 | 49 | 18 | 76 | 97 | 99 | 33 | 2 | 58 |
| 168 | Ill. 3104 | 49 | 18 | 75 | 99 | 98 | 33 | 4 | 35 |
| 169 | Ill. 3363 | 49 | 19 | 79 | 99 | 98 | 33 | 1 | 35 |
| 170 | Ill. 3366 | 45 | 18 | 72 | 98 | 95 | 35 | 4 | 35 |
| 171 | Iowa 5122 | 40 | 18 | 78 | 100 | 99 | 32 | 3 | 47 |
| 172 | Ill. 3231 | 38 | 18 | 79 | 93 | 96 | 30 | 4 | 46 |
| Average..... | | 74 | 19 | 81 | 90 | 97 | 35 | 2 | 23 |

Table 7.—THREE-WAY CROSSES AND STANDARDS
OF ILLINOIS 1570 MATURITY
Tested in Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|------------|------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| A—Inbred lines crossed with (Hy × WF9) | | | | | | | | | |
| 1 | R74A | 58 | 21 | 74 | 97 | 94 | 34 | 1 | 6 |
| 2 | R76 | 83 | 19 | 81 | 93 | 96 | 37 | 9 | 15 |
| 3 | R78 | 65 | 21 | 80 | 74 | 93 | 28 | 3 | 8 |
| 4 | R84 | 58 | 19 | 79 | 93 | 98 | 36 | 1 | 5 |
| 5 | R196 | 40 | 20 | 78 | 88 | 98 | 36 | 1 | 2 |
| 6 | H51 | 85 | 21 | 78 | 91 | 98 | 36 | 2 | 5 |
| 7 | 38-11 | 76 | 21 | 80 | 95 | 100 | 52 | 7 | 19 |
| 8 | L317 | 76 | 21 | 82 | 57 | 94 | 40 | 4 | 5 |
| 9 | Ia47:1313 | 57 | 19 | 77 | 92 | 98 | 36 | 1 | 4 |
| 10 | Ia57:1357 | 83 | 22 | 79 | 93 | 99 | 36 | 2 | 0 |
| 11 | K807 | 64 | 19 | 78 | 98 | 95 | 33 | 0 | 2 |
| 12 | K808 | 73 | 21 | 78 | 83 | 99 | 36 | 0 | 2 |
| 13 | M04582 | 111 | 22 | 80 | 89 | 97 | 40 | 22 | |
| 14 | Mo61004 | 84 | 23 | 75 | 87 | 93 | 34 | 0 | 3 |
| 15 | Mo61018 | 61 | 24 | 73 | 96 | 96 | 35 | 1 | 3 |
| 16 | CI.38B | 79 | 20 | 75 | 97 | 99 | 38 | 2 | 7 |
| Average | | 72 | 21 | 78 | 89 | 97 | 36 | 4 | 6 |
| B—Inbred lines crossed with (B14 × CI.31A) | | | | | | | | | |
| 17 | Hy | 103 | 22 | 83 | 80 | 93 | 41 | 0 | 1 |
| 18 | R74A | 53 | 22 | 77 | 100 | 94 | 32 | 0 | 4 |
| 19 | R76 | 83 | 20 | 80 | 71 | 96 | 42 | 4 | 6 |
| 20 | R78 | 83 | 20 | 80 | 74 | 96 | 34 | 3 | 2 |
| 21 | R84 | 84 | 19 | 78 | 68 | 95 | 38 | 0 | 6 |
| 22 | R196 | 95 | 22 | 81 | 89 | 98 | 36 | 0 | 0 |
| 23 | WF9 | 79 | 20 | 81 | 92 | 96 | 32 | 0 | 8 |
| 24 | H49 | 72 | 22 | 79 | 88 | 100 | 36 | 1 | 1 |
| 25 | H51 | 74 | 20 | 78 | 79 | 97 | 32 | 0 | 2 |
| 26 | H52 | 70 | 21 | 74 | 98 | 98 | 42 | 2 | 4 |
| 27 | H55 | 94 | 22 | 82 | 64 | 99 | 40 | 0 | 4 |
| 28 | H56 | 111 | 24 | 82 | 79 | 99 | 40 | 0 | 0 |
| 29 | 38-11 | 93 | 19 | 79 | 95 | 100 | 40 | 4 | 6 |
| 30 | B41 | 54 | 21 | 77 | 95 | 97 | 36 | 0 | 2 |
| 31 | L317 | 68 | 21 | 78 | 58 | 97 | 40 | 0 | 3 |
| 32 | Ia57:1313 | 84 | 21 | 80 | 79 | 98 | 38 | 0 | 0 |
| 33 | Ia57:1357 | 74 | 24 | 78 | 92 | 95 | 33 | 0 | 2 |
| 34 | K807 | 72 | 20 | 75 | 97 | 99 | 36 | 0 | 2 |
| 35 | K808 | 61 | 24 | 77 | 88 | 97 | 34 | 0 | 9 |
| 36 | M04582 | 95 | 20 | 79 | 72 | 96 | 40 | 2 | 0 |
| 37 | Mo9120 | 108 | 21 | 83 | 93 | 99 | 34 | 0 | 1 |
| 38 | Mo9170 | 79 | 22 | 80 | 95 | 98 | 36 | 0 | 2 |
| 39 | Mo53683 | 87 | 21 | 79 | 84 | 99 | 36 | 2 | 3 |
| 40 | Mo61004 | 90 | 24 | 75 | 85 | 95 | 36 | 0 | 1 |
| 41 | Mo61018 | 59 | 24 | 76 | 97 | 94 | 30 | 0 | 0 |
| 42 | Mo61259 | 92 | 24 | 76 | 94 | 96 | 40 | 0 | 2 |
| 43 | CI.29A | 84 | 22 | 78 | 94 | 99 | 36 | 3 | 3 |
| 44 | CI.38B | 81 | 21 | 79 | 95 | 98 | 33 | 0 | 3 |
| 45 | CI.42A | 102 | 25 | 81 | 56 | 98 | 39 | 0 | 5 |
| Average | | 82 | 22 | 79 | 85 | 97 | 37 | 1 | 3 |
| C—Standard checks | | | | | | | | | |
| 47 | B14×CI.31A | 108 | 22 | 82 | 88 | 90 | 36 | 0 | 3 |
| 48 | Ill. 1332 | 77 | 19 | 81 | 94 | 99 | 38 | 0 | 18 |
| 49 | U.S. 13 | 72 | 20 | 78 | 80 | 97 | 44 | 1 | 12 |
| 46 | Hy×WF9 | 63 | 23 | 79 | 99 | 99 | 30 | 1 | 10 |
| Average | | 80 | 21 | 80 | 90 | 96 | 37 | 1 | 11 |
| Average of 49 entries | | 79 | 21 | 79 | 86 | 97 | 36 | 2 | 5 |

Table 8.—THREE-WAY CROSSES AND STANDARDS
Tested in Central Illinois, 1959

(Data in boldface were not statistically different
from the best performance for that characteristic)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|---|---------------|---------------|---------------------------|---------------|-----------------|--------|--------|-----|-----------------|--------|
| | | | | | | | Plant | Ear | | |
| A—Inbred lines crossed with (WF9 × Oh43) | | | | | | | | | | |
| | | bu. | perct. | perct. | perct. | perct. | in. | in. | perct. | perct. |
| 1 | R71..... | 91 | 20 | 80 | 90 | 100 | 67 | 31 | 1 | 4 |
| 2 | R74..... | 65 | 22 | 77 | 92 | 99 | 66 | 29 | 0 | 1 |
| 3 | R74A..... | 46 | 21 | 72 | 96 | 92 | 69 | 29 | 1 | 7 |
| 4 | R76..... | 86 | 22 | 78 | 79 | 89 | 77 | 38 | 4 | 7 |
| 5 | R78..... | 77 | 23 | 81 | 68 | 95 | 70 | 33 | 4 | 5 |
| 6 | R84..... | 67 | 21 | 80 | 89 | 98 | 68 | 33 | 2 | 5 |
| 7 | R101..... | 81 | 21 | 79 | 81 | 99 | 70 | 32 | 1 | 9 |
| 8 | R104..... | 81 | 21 | 82 | 88 | 100 | 70 | 34 | 0 | 11 |
| 9 | R109B..... | 79 | 23 | 79 | 94 | 88 | 69 | 31 | 1 | 1 |
| 10 | R112..... | 88 | 20 | 82 | 76 | 95 | 67 | 27 | 2 | 7 |
| 11 | R113..... | 68 | 21 | 74 | 84 | 97 | 67 | 31 | 0 | 5 |
| 12 | R114..... | 56 | 19 | 80 | 95 | 95 | 74 | 32 | 0 | 11 |
| 13 | R132..... | 80 | 21 | 79 | 67 | 100 | 69 | 33 | 1 | 5 |
| 14 | R134..... | 88 | 21 | 78 | 92 | 94 | 79 | 36 | 1 | 2 |
| 15 | R135..... | 76 | 21 | 83 | 74 | 96 | 67 | 31 | 9 | 14 |
| 16 | R151..... | 101 | 22 | 82 | 90 | 99 | 74 | 32 | 1 | 5 |
| 17 | R154..... | 95 | 21 | 82 | 62 | 98 | 71 | 31 | 0 | 5 |
| 18 | R158..... | 77 | 19 | 83 | 92 | 100 | 75 | 33 | 5 | 2 |
| 19 | R159..... | 56 | 22 | 76 | 98 | 98 | 62 | 26 | 0 | 2 |
| 20 | R166..... | 78 | 22 | 81 | 54 | 97 | 59 | 28 | 0 | 4 |
| 21 | R168..... | 89 | 19 | 84 | 85 | 99 | 68 | 28 | 3 | 5 |
| 22 | R172..... | 94 | 21 | 82 | 89 | 100 | 72 | 36 | 0 | 4 |
| 23 | R180..... | 69 | 22 | 76 | 80 | 97 | 66 | 27 | 5 | 6 |
| 24 | R181..... | 96 | 19 | 78 | 78 | 98 | 72 | 32 | 1 | 3 |
| 25 | R182..... | 62 | 20 | 79 | 94 | 97 | 70 | 33 | 3 | 2 |
| 26 | R183..... | 45 | 21 | 77 | 96 | 100 | 76 | 33 | 0 | 8 |
| 27 | R192..... | 86 | 23 | 79 | 85 | 99 | 71 | 28 | 0 | 4 |
| 28 | R193..... | 77 | 20 | 79 | 74 | 98 | 71 | 29 | 0 | 3 |
| 29 | R194..... | 78 | 23 | 79 | 77 | 99 | 70 | 33 | 0 | 3 |
| 30 | R195..... | 68 | 19 | 78 | 92 | 98 | 71 | 32 | 0 | 6 |
| 31 | R196..... | 75 | 21 | 79 | 92 | 98 | 72 | 35 | 4 | 4 |
| 32 | R197..... | 96 | 23 | 80 | 85 | 93 | 73 | 35 | 1 | 2 |
| 33 | R198..... | 95 | 24 | 80 | 79 | 97 | 74 | 32 | 1 | 16 |
| | Average..... | 78 | 21 | 79 | 84 | 97 | 70 | 32 | 2 | 6 |
| B—Single crosses | | | | | | | | | | |
| 34 | WF9×Oh43..... | 97 | 19 | 81 | 92 | 97 | 72 | 29 | 0 | 3 |
| 35 | WF9×B37..... | 76 | 23 | 75 | 90 | 100 | 74 | 35 | 0 | 9 |
| 36 | B41×Oh7A..... | 53 | 27 | 70 | 70 | 98 | 72 | 38 | 1 | 2 |
| | Average..... | 75 | 23 | 75 | 84 | 98 | 73 | 34 | 0 | 5 |
| C—Inbred lines crossed with (WF9 × B37) | | | | | | | | | | |
| 1 | R71..... | 95 | 24 | 78 | 90 | 95 | 72 | 26 | 2 | 5 |
| 2 | R74..... | 88 | 24 | 76 | 94 | 98 | 72 | 27 | 0 | 4 |
| 3 | R74A..... | 34 | 23 | 68 | 90 | 97 | 73 | 28 | 1 | 9 |
| 4 | R76..... | 70 | 22 | 78 | 92 | 93 | 77 | 32 | 1 | 22 |
| 5 | R78..... | 69 | 23 | 78 | 73 | 100 | 69 | 27 | 0 | 11 |
| 6 | R84..... | 42 | 22 | 72 | 93 | 100 | 71 | 33 | 0 | 17 |
| 7 | R101..... | 89 | 23 | 80 | 95 | 97 | 68 | 28 | 0 | 9 |
| 8 | R104..... | 74 | 22 | 81 | 75 | 97 | 72 | 30 | 1 | 5 |
| 9 | R109B..... | 58 | 24 | 75 | 90 | 92 | 72 | 30 | 0 | 10 |
| 10 | R112..... | 76 | 22 | 79 | 86 | 93 | 70 | 27 | 1 | 14 |
| 11 | R113..... | 61 | 21 | 72 | 93 | 98 | 66 | 29 | 0 | 14 |
| 12 | R114..... | 61 | 21 | 74 | 89 | 98 | 76 | 32 | 0 | 6 |
| 13 | R132..... | 91 | 22 | 79 | 58 | 98 | 67 | 29 | 2 | 9 |
| 14 | R134..... | 81 | 23 | 76 | 99 | 93 | 76 | 33 | 1 | 4 |
| 15 | R135..... | 63 | 23 | 79 | 79 | 89 | 73 | 34 | 1 | 28 |

(Table is continued on next page)

Table 8.—Continued

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height Plant | Height Ear | Dropped ears | Smut |
|--|----------|---------------|---------------------------|---------------|-----------------|-------|-----------------|---------------|-----------------|------|
| C — Inbred lines crossed with (WF9 × B37) — concluded | | | | | | | | | | |
| 16 | R151 | 97 | 23 | 79 | 87 | 98 | 78 | 34 | 0 | 5 |
| 17 | R154 | 91 | 22 | 81 | 75 | 96 | 76 | 30 | 2 | 8 |
| 18 | R158 | 64 | 20 | 75 | 97 | 97 | 81 | 33 | 3 | 8 |
| 19 | R159 | 51 | 23 | 72 | 97 | 97 | 71 | 27 | 0 | 12 |
| 20 | R166 | 87 | 23 | 80 | 86 | 97 | 63 | 28 | 0 | 2 |
| 21 | R168 | 80 | 21 | 81 | 98 | 96 | 67 | 25 | 0 | 12 |
| 22 | R172 | 76 | 23 | 77 | 98 | 99 | 70 | 31 | 0 | 7 |
| 23 | R180 | 69 | 21 | 78 | 93 | 99 | 65 | 26 | 5 | 15 |
| 24 | R181 | 93 | 20 | 77 | 97 | 97 | 73 | 30 | 1 | 4 |
| 25 | R182 | 53 | 20 | 74 | 96 | 99 | 73 | 26 | 0 | 4 |
| 26 | R183 | 40 | 24 | 74 | 98 | 95 | 74 | 35 | 0 | 7 |
| 27 | R192 | 82 | 23 | 76 | 95 | 99 | 73 | 30 | 1 | 12 |
| 28 | R193 | 63 | 21 | 75 | 82 | 97 | 71 | 25 | 1 | 6 |
| 29 | R194 | 76 | 26 | 77 | 92 | 99 | 69 | 32 | 1 | 4 |
| 30 | R195 | 68 | 20 | 75 | 91 | 94 | 72 | 32 | 0 | 5 |
| 31 | R196 | 69 | 23 | 76 | 84 | 99 | 76 | 33 | 0 | 7 |
| 32 | R197 | 87 | 24 | 77 | 78 | 94 | 76 | 34 | 3 | 2 |
| 33 | R198 | 66 | 24 | 75 | 87 | 93 | 77 | 35 | 1 | 22 |
| Average..... | | 72 | 22 | 76 | 89 | 96 | 72 | 30 | 1 | 10 |
| D — Single crosses | | | | | | | | | | |
| 34 | WF9×Oh43 | 98 | 20 | 80 | 91 | 95 | 70 | 24 | 1 | 0 |
| 35 | WF9×B37 | 60 | 22 | 72 | 95 | 94 | 71 | 30 | 0 | 13 |
| 36 | B41×Oh7A | 53 | 26 | 70 | 61 | 100 | 72 | 38 | 1 | 10 |
| Average..... | | 70 | 23 | 74 | 82 | 96 | 71 | 31 | 1 | 8 |
| E — Inbred lines crossed with (B41 × Oh7A) | | | | | | | | | | |
| 1 | R71 | 104 | 26 | 80 | 90 | 99 | 74 | 38 | 2 | 1 |
| 2 | R74 | 90 | 25 | 78 | 88 | 100 | 72 | 34 | 0 | 5 |
| 3 | R74A | 15 | 26 | 68 | 99 | 100 | 63 | 30 | 0 | 12 |
| 4 | R76 | 75 | 25 | 76 | 80 | 100 | 79 | 46 | 0 | 17 |
| 5 | R78 | 67 | 25 | 81 | 60 | 98 | 71 | 36 | 0 | 18 |
| 6 | R84 | 42 | 22 | 75 | 95 | 98 | 70 | 38 | 1 | 10 |
| 7 | R101 | 52 | 24 | 80 | 97 | 100 | 70 | 32 | 1 | 15 |
| 8 | R104 | 86 | 22 | 83 | 86 | 89 | 68 | 31 | 0 | 12 |
| 9 | R109B | 49 | 27 | 74 | 92 | 97 | 74 | 39 | 0 | 6 |
| 10 | R112 | 66 | 23 | 80 | 88 | 99 | 70 | 32 | 1 | 14 |
| 11 | R113 | 41 | 25 | 73 | 97 | 100 | 59 | 37 | 0 | 17 |
| 12 | R114 | 54 | 22 | 76 | 86 | 96 | 76 | 36 | 0 | 12 |
| 13 | R132 | 62 | 24 | 78 | 61 | 97 | 71 | 36 | 0 | 7 |
| 14 | R134 | 71 | 26 | 77 | 91 | 98 | 74 | 37 | 1 | 6 |
| 15 | R135 | 30 | 23 | 81 | 89 | 99 | 69 | 38 | 2 | 14 |
| 16 | R151 | 92 | 25 | 80 | 90 | 98 | 78 | 37 | 0 | 13 |
| 17 | R154 | 93 | 23 | 82 | 46 | 100 | 74 | 37 | 0 | 2 |
| 18 | R158 | 54 | 23 | 79 | 98 | 98 | 81 | 40 | 6 | 4 |
| 19 | R159 | 40 | 25 | 73 | 97 | 100 | 70 | 36 | 0 | 4 |
| 20 | R166 | 79 | 24 | 81 | 48 | 99 | 70 | 35 | 0 | 6 |
| 21 | R168 | 79 | 21 | 83 | 96 | 84 | 71 | 37 | 0 | 18 |
| 22 | R172 | 73 | 23 | 80 | 91 | 95 | 73 | 37 | 1 | 9 |
| 23 | R180 | 66 | 24 | 77 | 88 | 98 | 65 | 32 | 2 | 3 |
| 24 | R181 | 86 | 22 | 78 | 71 | 97 | 75 | 37 | 0 | 7 |
| 25 | R182 | 59 | 23 | 77 | 99 | 99 | 71 | 35 | 1 | 3 |
| 26 | R183 | 36 | 25 | 78 | 94 | 97 | 73 | 37 | 0 | 5 |
| 27 | R192 | 69 | 26 | 75 | 72 | 100 | 75 | 39 | 0 | 10 |
| 28 | R193 | 67 | 23 | 77 | 86 | 99 | 74 | 33 | 2 | 5 |
| 29 | R194 | 49 | 26 | 75 | 89 | 98 | 72 | 37 | 2 | 5 |
| 30 | R195 | 58 | 22 | 77 | 91 | 98 | 72 | 41 | 0 | 11 |
| 31 | R196 | 70 | 24 | 74 | 88 | 97 | 74 | 37 | 0 | 4 |
| 32 | R197 | 61 | 26 | 77 | 89 | 91 | 71 | 37 | 3 | 4 |
| 33 | R198 | 56 | 25 | 78 | 87 | 99 | 79 | 48 | 1 | 21 |
| Average..... | | 64 | 24 | 78 | 85 | 97 | 72 | 37 | 1 | 9 |

(Table is concluded on next page)

Table 8.—Concluded

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height Plant | Height Ear | Dropped ears | Smut |
|--|---------------|------------|---------------------------|---------------|-----------------|------------|-----------------|---------------|-----------------|----------|
| F — Single crosses | | | | | | | | | | |
| 34 | WF9×Oh43..... | 72 | 22 | 77 | 77 | 94 | 70 | 31 | 0 | 9 |
| 35 | WF9×B37..... | 75 | 21 | 78 | 81 | 96 | 70 | 32 | 0 | 5 |
| 36 | B41×Oh7A..... | 46 | 27 | 72 | 84 | 100 | 71 | 38 | 0 | 6 |
| | Average..... | 64 | 23 | 76 | 81 | 97 | 70 | 34 | 0 | 6 |
| G — Mean of inbred lines crossed with three testers | | | | | | | | | | |
| 1 | R71..... | 97 | 23 | 79 | 90 | 98 | 71 | 32 | 2 | 3 |
| 2 | R74..... | 81 | 24 | 77 | 91 | 99 | 70 | 30 | 0 | 3 |
| 3 | R74A..... | 31 | 24 | 69 | 95 | 96 | 68 | 29 | 0 | 9 |
| 4 | R76..... | 77 | 23 | 77 | 84 | 94 | 78 | 39 | 2 | 15 |
| 5 | R78..... | 71 | 23 | 80 | 67 | 98 | 70 | 32 | 1 | 11 |
| 6 | R84..... | 51 | 22 | 75 | 92 | 99 | 70 | 35 | 1 | 11 |
| 7 | R101..... | 74 | 22 | 80 | 91 | 99 | 69 | 31 | 1 | 11 |
| 8 | R104..... | 80 | 22 | 82 | 83 | 95 | 70 | 32 | 0 | 9 |
| 9 | R109B..... | 62 | 25 | 76 | 92 | 92 | 72 | 34 | 0 | 6 |
| 10 | R112..... | 77 | 22 | 80 | 83 | 96 | 69 | 29 | 1 | 12 |
| 11 | R113..... | 57 | 22 | 73 | 91 | 98 | 64 | 32 | 0 | 12 |
| 12 | R114..... | 57 | 21 | 76 | 90 | 96 | 75 | 33 | 0 | 10 |
| 13 | R132..... | 78 | 22 | 79 | 62 | 98 | 69 | 33 | 1 | 7 |
| 14 | R134..... | 80 | 23 | 77 | 94 | 95 | 77 | 36 | 1 | 4 |
| 15 | R135..... | 57 | 23 | 81 | 80 | 95 | 70 | 34 | 4 | 19 |
| 16 | R151..... | 97 | 23 | 80 | 89 | 98 | 77 | 35 | 0 | 8 |
| 17 | R154..... | 93 | 22 | 82 | 61 | 98 | 74 | 33 | 1 | 5 |
| 18 | R158..... | 65 | 21 | 79 | 96 | 98 | 79 | 36 | 5 | 5 |
| 19 | R159..... | 49 | 23 | 74 | 97 | 98 | 68 | 30 | 0 | 6 |
| 20 | R166..... | 81 | 23 | 81 | 63 | 98 | 64 | 31 | 0 | 4 |
| 21 | R168..... | 83 | 20 | 83 | 93 | 93 | 69 | 30 | 1 | 11 |
| 22 | R172..... | 81 | 22 | 80 | 93 | 98 | 72 | 35 | 0 | 7 |
| 23 | R180..... | 68 | 22 | 77 | 87 | 98 | 66 | 29 | 4 | 8 |
| 24 | R181..... | 92 | 20 | 78 | 82 | 97 | 74 | 33 | 1 | 5 |
| 25 | R182..... | 58 | 21 | 77 | 96 | 98 | 72 | 31 | 1 | 3 |
| 26 | R183..... | 40 | 23 | 76 | 96 | 97 | 74 | 35 | 0 | 7 |
| 27 | R192..... | 79 | 24 | 77 | 84 | 99 | 73 | 32 | 0 | 9 |
| 28 | R193..... | 69 | 22 | 77 | 81 | 98 | 72 | 29 | 1 | 5 |
| 29 | R194..... | 68 | 25 | 77 | 86 | 99 | 71 | 34 | 1 | 4 |
| 30 | R195..... | 65 | 20 | 76 | 91 | 97 | 72 | 35 | 0 | 7 |
| 31 | R196..... | 72 | 22 | 76 | 88 | 98 | 74 | 35 | 1 | 5 |
| 32 | R197..... | 81 | 24 | 78 | 84 | 93 | 73 | 36 | 2 | 3 |
| 33 | R198..... | 72 | 24 | 78 | 84 | 96 | 77 | 38 | 1 | 20 |
| | Average..... | 71 | 23 | 78 | 86 | 97 | 72 | 33 | 1 | 8 |
| H — Mean of three single-cross testers | | | | | | | | | | |
| 34 | WF9×Oh43..... | 89 | 20 | 79 | 87 | 95 | 71 | 28 | 0 | 4 |
| 35 | WF9×B37..... | 70 | 22 | 75 | 89 | 97 | 72 | 32 | 0 | 9 |
| 36 | B41×Oh7A..... | 51 | 27 | 71 | 72 | 99 | 72 | 38 | 1 | 6 |
| | Average..... | 70 | 23 | 75 | 83 | 97 | 72 | 33 | 0 | 6 |

Table 9.—HYBRIDS INVOLVING RELATED INBREDS
OF ILLINOIS 1570 MATURITY
Tested in Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|---------------------------------|------------|---------------------------|---------------|-----------------|------------|---------------|-----------------|----------|
| A—Hybrids involving related inbreds | | | | | | | | | |
| 1 | Hy2×WF9... | 60 | 19 | 77 | 94 | 98 | 29 | 0 | 6 |
| 2 | (Hy2×R138)(WF9×R75)... | 73 | 20 | 81 | 97 | 96 | 36 | 4 | 21 |
| 3 | (Hy2×R158)(WF9×R75)... | 73 | 20 | 80 | 94 | 93 | 39 | 2 | 16 |
| 4 | Hy2×38-11... | 85 | 20 | 80 | 98 | 98 | 42 | 8 | 5 |
| 5 | (Hy2×R138)(38-11×R76)... | 80 | 19 | 81 | 81 | 100 | 46 | 3 | 17 |
| 6 | (Hy2×R158)(38-11×R76)... | 91 | 19 | 81 | 89 | 94 | 45 | 10 | 10 |
| 7 | (Hy2×R138)(38-11×CI.38B)... | 84 | 19 | 80 | 93 | 97 | 41 | 5 | 9 |
| 8 | (Hy2×R158)(38-11×CI.38B)... | 67 | 20 | 80 | 93 | 97 | 37 | 2 | 11 |
| 9 | Hy2×Oh7... | 116 | 20 | 84 | 76 | 93 | 39 | 0 | 0 |
| 10 | (Hy2×R138)(Oh7×Oh7A)... | 112 | 22 | 83 | 67 | 99 | 40 | 1 | 6 |
| 11 | (Hy2×R158)(Oh7×Oh7A)... | 106 | 22 | 80 | 86 | 89 | 41 | 0 | 1 |
| 12 | (Hy2×R138)(Oh7×Oh7B)... | 124 | 20 | 85 | 84 | 99 | 40 | 0 | 6 |
| 13 | (Hy2×R158)(Oh7×Oh7B)... | 104 | 21 | 84 | 89 | 89 | 39 | 1 | 2 |
| 14 | Hy2×Oh41... | 84 | 21 | 81 | 96 | 94 | 37 | 2 | 1 |
| 15 | (Hy2×R138)(Oh41×R118)... | 63 | 21 | 78 | 85 | 98 | 42 | 0 | 4 |
| 16 | (Hy2×R158)(Oh41×R118)... | 61 | 20 | 73 | 91 | 97 | 41 | 1 | 6 |
| 17 | (Hy2×R138)(Oh41×CI.317B)... | 85 | 22 | 78 | 73 | 97 | 45 | 1 | 3 |
| 18 | (Hy2×R158)(Oh41×CI.317B)... | 86 | 24 | 79 | 68 | 98 | 43 | 1 | 1 |
| 19 | Hy2×187-2... | 60 | 19 | 82 | 96 | 96 | 36 | 1 | 12 |
| 20 | (Hy2×R138)(187-2×W187R)... | 52 | 21 | 78 | 87 | 98 | 39 | 1 | 7 |
| 21 | (Hy2×R158)(187-2×W187R)... | 55 | 20 | 79 | 90 | 99 | 38 | 4 | 3 |
| 22 | (Hy2×R138)(187-2×R84)... | 56 | 20 | 83 | 85 | 96 | 41 | 2 | 5 |
| 23 | (Hy2×R158)(187-2×R84)... | 49 | 19 | 78 | 93 | 96 | 38 | 3 | 7 |
| 24 | WF9×38-11... | 83 | 18 | 81 | 94 | 100 | 37 | 3 | 7 |
| 25 | (WF9×R75)(38-11×R76)... | 74 | 19 | 78 | 98 | 94 | 38 | 3 | 25 |
| 26 | (WF9×R75)(38-11×CI.38B)... | 91 | 18 | 81 | 100 | 94 | 35 | 3 | 25 |
| 27 | WF9×Oh7... | 99 | 20 | 83 | 97 | 96 | 31 | 0 | 5 |
| 28 | (WF9×R75)(Oh7×Oh7A)... | 104 | 21 | 81 | 85 | 93 | 34 | 1 | 12 |
| 29 | (WF9×R75)(Oh7×Oh7B)... | 95 | 18 | 79 | 98 | 95 | 30 | 0 | 7 |
| 30 | WF9×Oh41... | 97 | 19 | 79 | 52 | 99 | 34 | 1 | 4 |
| 31 | (WF9×R75)(Oh41×R118)... | 83 | 20 | 79 | 76 | 93 | 37 | 2 | 5 |
| 32 | (WF9×R75)(Oh41×CI.317B)... | 89 | 23 | 77 | 64 | 97 | 40 | 1 | 5 |
| 33 | WF9×187-2... | 68 | 20 | 83 | 100 | 93 | 35 | 1 | 13 |
| 34 | (WF9×R75)(187-2×W187R)... | 72 | 18 | 81 | 85 | 100 | 34 | 1 | 14 |
| 35 | (WF9×R75)(187-2×R84)... | 71 | 18 | 82 | 94 | 92 | 37 | 1 | 14 |
| 36 | 38-11×Oh7... | 109 | 21 | 80 | 86 | 97 | 39 | 0 | 15 |
| 37 | (38-11×R76)(Oh7×Oh7A)... | 109 | 21 | 82 | 74 | 100 | 44 | 1 | 15 |
| 38 | (38-11×CI.38B)(Oh7×Oh7A)... | 110 | 22 | 79 | 72 | 97 | 42 | 0 | 14 |
| 39 | (38-11×R76)(Oh7×Oh7B)... | 108 | 22 | 82 | 74 | 96 | 43 | 0 | 15 |
| 40 | (38-11×CI.38B)(Oh7×Oh7B)... | 102 | 20 | 83 | 89 | 100 | 41 | 0 | 24 |
| 41 | 38-11×Oh41... | 78 | 24 | 80 | 84 | 96 | 35 | 2 | 1 |
| 42 | (38-11×R76)(Oh41×R118)... | 71 | 21 | 78 | 84 | 91 | 44 | 0 | 15 |
| 43 | (38-11×CI.38B)(Oh41×R118)... | 72 | 21 | 76 | 87 | 97 | 42 | 0 | 6 |
| 44 | (38-11×R76)(Oh41×CI.317B)... | 81 | 22 | 74 | 60 | 94 | 44 | 0 | 5 |
| 45 | (38-11×CI.38B)(Oh41×CI.317B)... | 75 | 22 | 74 | 78 | 95 | 44 | 0 | 5 |
| 46 | 38-11×187-2... | 73 | 19 | 82 | 90 | 99 | 33 | 1 | 9 |
| 47 | (38-11×R76)(187-2×W187R)... | 76 | 19 | 84 | 77 | 100 | 39 | 4 | 8 |
| 48 | (38-11×CI.38B)(187-2×W187R)... | 76 | 20 | 85 | 87 | 99 | 35 | 3 | 14 |
| 49 | (38-11×R76)(187-2×R84)... | 63 | 19 | 76 | 87 | 95 | 43 | 2 | 18 |
| 50 | (38-11×CI.38B)(187-2×R84)... | 60 | 20 | 79 | 97 | 99 | 39 | 5 | 23 |
| 51 | Oh7×Oh41... | 101 | 22 | 79 | 81 | 94 | 36 | 0 | 3 |
| 52 | (Oh7×Oh7A)(Oh41×R118)... | 95 | 23 | 77 | 64 | 93 | 42 | 0 | 4 |
| 53 | (Oh7×Oh7B)(Oh41×R118)... | 100 | 22 | 80 | 75 | 100 | 40 | 0 | 2 |
| 54 | (Oh7×Oh7A)(Oh41×CI.317B)... | 113 | 25 | 79 | 45 | 99 | 45 | 1 | 2 |
| 55 | (Oh7×Oh7B)(Oh41×CI.317B)... | 93 | 24 | 79 | 63 | 95 | 42 | 0 | 5 |

(Table is concluded on next page)

Table 9.—Concluded

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|--------------------------------------|---------------|---------------------------|---------------|-----------------|-----------|---------------|-----------------|----------|
| A — Hybrids involving related inbreds — concluded | | | | | | | | | |
| 56 | (Oh7×187-2)..... | 108 | 20 | 84 | 71 | 99 | 36 | 0 | 6 |
| 57 | (Oh7×Oh7A)(187-2×W187R)... | 94 | 22 | 82 | 59 | 96 | 37 | 0 | 4 |
| 58 | (Oh7×Oh7B)(187-2×W187R)... | 97 | 19 | 82 | 56 | 94 | 37 | 0 | 4 |
| 59 | (Oh7×Oh7A)(187-2×R84)..... | 103 | 21 | 82 | 60 | 99 | 39 | 0 | 7 |
| 60 | (Oh7×Oh7B)(187-2×R84)..... | 98 | 22 | 82 | 74 | 97 | 36 | 0 | 7 |
| 61 | Oh41×187-2..... | 82 | 22 | 80 | 61 | 80 | 40 | 0 | 4 |
| 62 | (Oh41×R118)(187-2×W187R)... | 64 | 22 | 81 | 67 | 96 | 40 | 1 | 6 |
| 63 | (Oh41×CI.317B)(187-2× W187R)..... | 65 | 26 | 80 | 45 | 95 | 41 | 0 | 2 |
| 64 | (Oh41×R118)(187-2×R84)..... | 55 | 21 | 77 | 76 | 99 | 40 | 1 | 12 |
| 65 | (Oh41×CI.317B)(187-2×R84)... | 57 | 24 | 76 | 64 | 88 | 44 | 2 | 19 |
| | Average..... | 84 | 21 | 80 | 81 | 96 | 39 | 1 | 9 |
| B — Sister-line crosses | | | | | | | | | |
| 66 | R138×R158..... | 72 | 21 | 79 | 85 | 93 | 38 | 4 | 4 |
| 67 | R158×CI.42A..... | 74 | 22 | 82 | 75 | 97 | 39 | 8 | 7 |
| | Average..... | 73 | 22 | 80 | 80 | 95 | 38 | 6 | 6 |
| C — Double crosses | | | | | | | | | |
| 68 | Ill. 1332..... | 90 | 19 | 82 | 94 | 99 | 37 | 1 | 7 |
| 69 | Ill. 1570..... | 79 | 23 | 79 | 90 | 96 | 37 | 2 | 7 |
| 70 | Ill. 3049..... | 71 | 22 | 81 | 92 | 96 | 35 | 1 | 3 |
| 71 | Ill. 6021..... | 55 | 21 | 78 | 86 | 94 | 40 | 1 | 19 |
| 72 | Ill. 6052..... | 52 | 22 | 78 | 81 | 96 | 40 | 2 | 11 |
| | Average..... | 69 | 21 | 80 | 89 | 96 | 38 | 1 | 9 |
| | Average of 72 entries..... | 82 | 21 | 80 | 81 | 96 | 39 | 2 | 9 |

Table 10.—DOUBLE CROSSES OF ILLINOIS 1851 MATURITY
Tested in South-Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|------------|---------------|---------------------------|---------------|-----------------|------------|---------------|-----------------|------|
| A—Three-year averages, 1957-1959 | | | | | | | | | |
| 1 | Ill. 1851 | 105 | 26 | 77 | 85 | 99 | 49 | ... | 4 |
| 2 | Ill. 1660 | 103 | 28 | 77 | 82 | 98 | 45 | ... | 1 |
| 3 | Ill. 3133 | 99 | 26 | 80 | 86 | 99 | 45 | ... | 4 |
| 4 | Ill. 1539A | 98 | 29 | 77 | 90 | 98 | 49 | ... | 3 |
| 5 | Ill. 1928 | 97 | 27 | 78 | 94 | 99 | 46 | ... | 6 |
| 6 | U.S. 523W | 97 | 29 | 76 | 69 | 99 | 44 | ... | 2 |
| 7 | Ill. 1852 | 96 | 28 | 73 | 81 | 96 | 45 | ... | 2 |
| 8 | Ill. 3129 | 96 | 26 | 78 | 86 | 99 | 45 | ... | 4 |
| 9 | Ill. 3140 | 96 | 28 | 76 | 80 | 99 | 49 | ... | 3 |
| 10 | Ill. 3147 | 95 | 26 | 78 | 79 | 99 | 47 | ... | 4 |
| 11 | Ill. 1856 | 94 | 28 | 74 | 96 | 99 | 44 | ... | 4 |
| 12 | Ill. 3126 | 94 | 25 | 79 | 90 | 97 | 45 | ... | 2 |
| 13 | Ill. 3145 | 94 | 27 | 77 | 90 | 96 | 45 | ... | 8 |
| 14 | Ill. 3135 | 94 | 27 | 76 | 94 | 98 | 46 | ... | 1 |
| 15 | Ill. 1850 | 94 | 28 | 74 | 89 | 97 | 46 | ... | 3 |
| 16 | Ill. 1849 | 94 | 28 | 72 | 96 | 99 | 45 | ... | 1 |
| 17 | Ill. 1893 | 94 | 25 | 75 | 92 | 99 | 47 | ... | 4 |
| 18 | Ill. 1913 | 93 | 22 | 82 | 89 | 99 | 44 | ... | 2 |
| 19 | Ill. 3149 | 93 | 25 | 79 | 94 | 96 | 43 | ... | 3 |
| 20 | Ill. 1909 | 92 | 24 | 80 | 90 | 95 | 44 | ... | 7 |
| 21 | Ill. 1918 | 91 | 26 | 79 | 86 | 97 | 44 | ... | 2 |
| 22 | Ill. 1948 | 91 | 27 | 79 | 79 | 98 | 45 | ... | 1 |
| 23 | Ill. 3131 | 91 | 27 | 78 | 81 | 97 | 47 | ... | 4 |
| 24 | Ill. 1332 | 90 | 25 | 79 | 91 | 98 | 44 | ... | 6 |
| 25 | AES 805 | 89 | 24 | 77 | 93 | 98 | 44 | ... | 7 |
| 26 | Ill. 3136 | 89 | 25 | 78 | 94 | 99 | 43 | ... | 1 |
| 27 | Ill. 1570 | 88 | 25 | 77 | 89 | 98 | 43 | ... | 1 |
| 28 | Ill. 1935 | 88 | 23 | 78 | 88 | 99 | 43 | ... | 7 |
| 29 | Ill. 200 | 88 | 26 | 78 | 74 | 97 | 46 | ... | 5 |
| 30 | U.S. 13 | 87 | 26 | 78 | 76 | 97 | 46 | ... | 2 |
| 31 | Ill. 1889 | 81 | 25 | 76 | 91 | 98 | 43 | ... | 12 |
| Average | | 93 | 26 | 77 | 87 | 98 | 45 | ... | 4 |
| B—Two-year averages, 1958-1959 | | | | | | | | | |
| 1 | Ill. 3190 | 125 | 20 | 82 | 94 | 98 | 46 | ... | 4 |
| 2 | Ill. 3198A | 122 | 20 | 84 | 84 | 99 | 46 | ... | 4 |
| 3 | Kan. 4003 | 122 | 20 | 86 | 78 | 99 | 46 | ... | 4 |
| 4 | Ky. 105 | 120 | 20 | 82 | 88 | 97 | 45 | ... | 6 |
| 5 | Ill. 1660 | 119 | 21 | 83 | 93 | 98 | 44 | ... | 1 |
| 6 | Ky. 5712W | 117 | 21 | 81 | 97 | 100 | 42 | ... | 3 |
| 7 | Ill. 3193 | 116 | 19 | 84 | 90 | 98 | 44 | ... | 3 |
| 8 | Ill. 3192A | 116 | 20 | 82 | 84 | 96 | 46 | ... | 2 |
| 9 | Ill. 1851 | 114 | 20 | 82 | 90 | 99 | 46 | ... | 6 |
| 10 | Ill. 3204A | 114 | 20 | 80 | 96 | 99 | 46 | ... | 4 |
| 11 | Ill. 3214 | 114 | 20 | 82 | 85 | 100 | 44 | ... | 6 |
| 12 | Ill. 1856 | 113 | 20 | 82 | 95 | 99 | 44 | ... | 6 |
| 13 | Ill. 3197B | 112 | 20 | 80 | 94 | 98 | 43 | ... | 4 |
| 14 | Ill. 3210 | 112 | 21 | 80 | 96 | 97 | 46 | ... | 8 |
| 15 | Ill. 1852 | 112 | 19 | 80 | 88 | 98 | 43 | ... | 3 |
| 16 | U.S. 523W | 112 | 21 | 81 | 80 | 99 | 43 | ... | 4 |
| 17 | Ill. 1849 | 112 | 20 | 80 | 99 | 100 | 43 | ... | 2 |
| 18 | Ill. 3192 | 112 | 20 | 82 | 86 | 94 | 45 | ... | 0 |
| 19 | Ill. 1539A | 111 | 20 | 80 | 96 | 99 | 46 | ... | 4 |
| 20 | Ill. 3135 | 111 | 18 | 82 | 93 | 99 | 46 | ... | 1 |

(Table is continued on next page)

Table 10.—Continued

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|--------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| B — Two-year averages, 1958-1959 — continued | | | | | | | | | |
| 21 | Ill. 3140. | 111 | 20 | 82 | 97 | 100 | 45 | ... | 5 |
| 22 | Ill. 3133. | 110 | 20 | 84 | 90 | 99 | 44 | ... | 6 |
| 23 | Ill. 3206. | 110 | 21 | 80 | 96 | 98 | 43 | ... | 4 |
| 24 | Ill. 1850. | 108 | 20 | 78 | 96 | 96 | 45 | ... | 4 |
| 25 | Ill. 3131. | 108 | 18 | 82 | 82 | 99 | 46 | ... | 6 |
| 26 | Ill. 3145. | 108 | 20 | 82 | 91 | 98 | 45 | ... | 10 |
| 27 | Ill. 1928. | 107 | 20 | 82 | 96 | 99 | 44 | ... | 10 |
| 28 | Ill. 3129. | 105 | 19 | 82 | 90 | 99 | 42 | ... | 6 |
| 29 | Ill. 3147. | 104 | 18 | 81 | 84 | 99 | 46 | ... | 6 |
| 30 | U.S. 13. | 104 | 18 | 83 | 83 | 99 | 44 | ... | 4 |
| 31 | Ill. 3149. | 102 | 18 | 82 | 93 | 97 | 41 | ... | 4 |
| 32 | Ill. 1909. | 102 | 18 | 84 | 84 | 97 | 42 | ... | 10 |
| 33 | Ill. 3126. | 102 | 20 | 82 | 90 | 97 | 43 | ... | 3 |
| 34 | Ill. 1893. | 102 | 18 | 78 | 94 | 98 | 44 | ... | 6 |
| 35 | Ill. 1332. | 100 | 17 | 82 | 90 | 98 | 42 | ... | 8 |
| 36 | Ill. 1913. | 100 | 18 | 86 | 88 | 99 | 42 | ... | 3 |
| 37 | Ill. 1918. | 100 | 20 | 83 | 83 | 98 | 44 | ... | 3 |
| 38 | Ill. 1948. | 98 | 22 | 82 | 81 | 100 | 42 | ... | 2 |
| 39 | Ill. 1570. | 96 | 18 | 82 | 87 | 98 | 42 | ... | 2 |
| 40 | Ill. 3136. | 94 | 18 | 80 | 92 | 99 | 41 | ... | 2 |
| 41 | Ill. 200. | 94 | 18 | 80 | 75 | 96 | 44 | ... | 8 |
| 42 | AES 805. | 92 | 18 | 81 | 93 | 99 | 42 | ... | 10 |
| 43 | Ky. 5708. | 92 | 20 | 77 | 86 | 99 | 42 | ... | 4 |
| 44 | Ill. 1935. | 88 | 17 | 80 | 89 | 98 | 40 | ... | 11 |
| 45 | Ill. 1889. | 84 | 19 | 79 | 92 | 98 | 42 | ... | 18 |
| Average. | | 107 | 19 | 82 | 90 | 98 | 44 | ... | 5 |
| C — 1959 results (2 replications) | | | | | | | | | |
| 1 | AES 904W. | 141 | 24 | 79 | 84 | 100 | 42 | 0 | 8 |
| 2 | Ky. 105. | 126 | 21 | 81 | 95 | 98 | 40 | 0 | 2 |
| 3 | Tenn. 7110W. | 123 | 23 | 78 | 91 | 100 | 38 | 2 | 2 |
| 4 | Kan. 4003. | 122 | 22 | 83 | 70 | 100 | 40 | 1 | 4 |
| 5 | Ill. 3190. | 121 | 23 | 79 | 92 | 98 | 42 | 0 | 6 |
| 6 | Ill. 3198A. | 118 | 22 | 81 | 76 | 100 | 42 | 0 | 1 |
| 7 | Ky. 5712W. | 118 | 24 | 80 | 98 | 100 | 40 | 1 | 0 |
| 8 | Mo. 881. | 118 | 24 | 78 | 87 | 99 | 40 | 0 | 4 |
| 9 | Tenn. 7015. | 118 | 24 | 80 | 81 | 100 | 43 | 1 | 6 |
| 10 | U.S. 642. | 117 | 25 | 79 | 72 | 100 | 42 | 0 | 5 |
| 11 | Ill. 3154. | 115 | 24 | 78 | 82 | 100 | 39 | 0 | 2 |
| 12 | Tenn. 5005. | 114 | 22 | 79 | 80 | 100 | 40 | 0 | 2 |
| 13 | Tenn. 7018. | 114 | 22 | 83 | 77 | 95 | 42 | 0 | 7 |
| 14 | Ill. 1660. | 113 | 23 | 81 | 92 | 99 | 40 | 1 | 1 |
| 15 | Ill. 3157. | 112 | 20 | 81 | 54 | 100 | 42 | 2 | 4 |
| 16 | Ill. 3214. | 112 | 23 | 79 | 76 | 100 | 42 | 0 | 2 |
| 17 | Ill. 3251. | 112 | 23 | 80 | 85 | 100 | 42 | 4 | 0 |
| 18 | U.S. 523W. | 112 | 24 | 78 | 69 | 100 | 40 | 4 | 4 |
| 19 | U.S. 658. | 112 | 22 | 79 | 82 | 98 | 42 | 3 | 8 |
| 20 | Ill. 1851. | 111 | 22 | 79 | 86 | 100 | 40 | 2 | 8 |
| 21 | Ill. 3133. | 111 | 22 | 82 | 86 | 99 | 40 | 4 | 2 |
| 22 | Ill. 3197B. | 111 | 22 | 78 | 92 | 100 | 40 | 0 | 2 |
| 23 | Ill. 3362. | 111 | 22 | 81 | 91 | 100 | 40 | 0 | 10 |
| 24 | Ill. 3140. | 110 | 22 | 80 | 95 | 100 | 40 | 1 | 2 |
| 25 | Ill. 3192. | 110 | 23 | 79 | 79 | 100 | 42 | 2 | 0 |
| 26 | Ill. 3193. | 110 | 22 | 81 | 85 | 100 | 40 | 4 | 2 |
| 27 | Ill. 3135. | 109 | 20 | 81 | 88 | 100 | 40 | 2 | 2 |
| 28 | Ill. 3204A. | 108 | 23 | 78 | 95 | 100 | 41 | 2 | 1 |
| 29 | Ill. 3252. | 108 | 23 | 77 | 99 | 95 | 39 | 0 | 3 |
| 30 | Ill. 3360. | 107 | 21 | 81 | 85 | 100 | 38 | 1 | 5 |
| 31 | Kan. 2446W. | 107 | 22 | 76 | 85 | 100 | 40 | 1 | 2 |
| 32 | Ill. 1539A. | 105 | 23 | 77 | 92 | 99 | 40 | 2 | 3 |
| 33 | Ill. 1852. | 105 | 21 | 77 | 81 | 99 | 39 | 0 | 5 |
| 34 | Ill. 1856. | 104 | 23 | 78 | 95 | 100 | 38 | 1 | 10 |
| 35 | Ill. 3145. | 104 | 22 | 80 | 86 | 99 | 42 | 1 | 16 |

(Table is concluded on next page)

Table 10.—Concluded

| Rank in yield | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|--|------------------|---------------|---------------------------|---------------|-----------------|-------|---------------|-----------------|------|
| C—1959 results (2 replications)—concluded | | | | | | | | | |
| 36 | Ill. 3192A..... | 104 | 21 | 79 | 74 | 96 | 43 | 1 | 3 |
| 37 | Ill. 1849..... | 103 | 22 | 76 | 99 | 100 | 40 | 4 | 2 |
| 38 | Ill. 3206..... | 103 | 24 | 78 | 96 | 99 | 38 | 1 | 4 |
| 39 | Ill. 3337B..... | 103 | 20 | 82 | 86 | 95 | 40 | 1 | 5 |
| 40 | Mo. 916..... | 103 | 24 | 76 | 97 | 85 | 40 | 0 | 6 |
| 41 | Tenn. 501W..... | 103 | 23 | 76 | 80 | 95 | 38 | 1 | 4 |
| 42 | Tenn. 8106W..... | 103 | 23 | 78 | 84 | 100 | 38 | 1 | 11 |
| 43 | Ill. 1332..... | 102 | 19 | 80 | 92 | 100 | 39 | 0 | 12 |
| 44 | Ill. 1928..... | 101 | 23 | 79 | 99 | 99 | 40 | 1 | 18 |
| 45 | Ill. 3131..... | 101 | 20 | 81 | 72 | 100 | 40 | 0 | 6 |
| 46 | Ill. 3210..... | 101 | 24 | 77 | 97 | 94 | 42 | 1 | 4 |
| 47 | Ill. 3335..... | 101 | 21 | 78 | 79 | 95 | 40 | 4 | 3 |
| 48 | Ill. 3355..... | 101 | 22 | 81 | 92 | 100 | 36 | 4 | 0 |
| 49 | Ill. 6021..... | 101 | 21 | 80 | 89 | 99 | 40 | 3 | 8 |
| 50 | U.S. 13..... | 101 | 21 | 80 | 79 | 100 | 40 | 2 | 5 |
| 51 | Ark. 5614..... | 100 | 22 | 80 | 70 | 100 | 43 | 4 | 4 |
| 52 | Ill. 6115..... | 100 | 20 | 85 | 76 | 100 | 40 | 4 | 2 |
| 53 | Ill. 1850..... | 99 | 22 | 74 | 97 | 94 | 40 | 1 | 5 |
| 54 | Ill. 3337A..... | 99 | 19 | 80 | 85 | 100 | 39 | 0 | 4 |
| 55 | Ill. 3129..... | 97 | 22 | 79 | 88 | 100 | 38 | 1 | 1 |
| 56 | Ill. 3149..... | 97 | 20 | 80 | 94 | 100 | 37 | 1 | 4 |
| 57 | Ill. 3341A..... | 97 | 19 | 80 | 88 | 100 | 40 | 1 | 6 |
| 58 | Ill. 1909..... | 96 | 20 | 81 | 81 | 96 | 41 | 5 | 17 |
| 59 | Ill. 1948..... | 96 | 25 | 80 | 70 | 100 | 38 | 0 | 1 |
| 60 | Ill. 3147..... | 96 | 20 | 79 | 73 | 99 | 40 | 4 | 11 |
| 61 | Ill. 3250..... | 96 | 24 | 79 | 71 | 100 | 40 | 0 | 1 |
| 62 | Ill. 3341..... | 96 | 20 | 81 | 72 | 99 | 39 | 0 | 11 |
| 63 | Kan. 2561W..... | 96 | 22 | 77 | 99 | 100 | 34 | 4 | 8 |
| 64 | Ill. 3337..... | 95 | 19 | 79 | 75 | 100 | 37 | 1 | 0 |
| 65 | VPI 653..... | 95 | 22 | 80 | 90 | 98 | 37 | 3 | 5 |
| 66 | Ill. 1570..... | 94 | 20 | 79 | 82 | 99 | 38 | 1 | 2 |
| 67 | Ill. 3126..... | 94 | 22 | 78 | 87 | 94 | 39 | 0 | 5 |
| 68 | N.C. 5113..... | 94 | 25 | 83 | 86 | 90 | 40 | 5 | 9 |
| 69 | Ill. 1918..... | 93 | 23 | 81 | 72 | 100 | 38 | 2 | 5 |
| 70 | Ill. 1964..... | 93 | 20 | 79 | 72 | 100 | 40 | 4 | 9 |
| 71 | Ill. 3339A..... | 92 | 20 | 80 | 91 | 99 | 38 | 3 | 4 |
| 72 | Ill. 6052..... | 92 | 22 | 80 | 72 | 99 | 40 | 4 | 10 |
| 73 | VPI 648..... | 92 | 23 | 76 | 99 | 100 | 38 | 0 | 14 |
| 74 | Ill. 1893..... | 90 | 20 | 74 | 94 | 99 | 38 | 4 | 5 |
| 75 | Ill. 1913..... | 89 | 20 | 82 | 78 | 100 | 36 | 5 | 4 |
| 76 | Ill. 1996..... | 87 | 20 | 80 | 86 | 100 | 40 | 0 | 0 |
| 77 | Ill. 3338A..... | 87 | 20 | 82 | 91 | 99 | 38 | 1 | 1 |
| 78 | Ill. 200..... | 86 | 20 | 79 | 71 | 100 | 40 | 0 | 10 |
| 79 | Ill. 3336..... | 86 | 20 | 79 | 67 | 96 | 40 | 0 | 0 |
| 80 | Ill. 3339..... | 86 | 20 | 79 | 91 | 100 | 38 | 0 | 6 |
| 81 | Ill. 3049..... | 85 | 22 | 81 | 86 | 100 | 34 | 1 | 1 |
| 82 | Ill. 3136..... | 85 | 21 | 78 | 92 | 100 | 36 | 0 | 2 |
| 83 | Ill. 3339B..... | 84 | 20 | 79 | 91 | 99 | 38 | 0 | 5 |
| 84 | AES 805..... | 81 | 20 | 79 | 92 | 100 | 39 | 5 | 15 |
| 85 | Ill. 3340..... | 80 | 21 | 74 | 90 | 98 | 40 | 3 | 8 |
| 86 | Ill. 1935..... | 79 | 19 | 76 | 91 | 100 | 37 | 1 | 14 |
| 87 | Ill. 6001..... | 78 | 24 | 79 | 69 | 100 | 35 | 0 | 6 |
| 88 | Ill. 3338..... | 78 | 21 | 78 | 87 | 96 | 38 | 1 | 5 |
| 89 | Ill. 6109..... | 76 | 20 | 77 | 79 | 100 | 36 | 1 | 8 |
| 90 | Ky. 5708..... | 70 | 23 | 73 | 82 | 100 | 36 | 0 | 2 |
| 91 | Ill. 1889..... | 57 | 22 | 74 | 95 | 99 | 36 | 0 | 23 |
| Average..... | | 101 | 22 | 79 | 85 | 99 | 39 | 1 | 5 |

Table 11.—THREE-WAY CROSSES AND STANDARDS
OF ILLINOIS 1851 MATURITY
Tested in South-Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Ear height | Dropped ears | Smut |
|---|--------------------|------------|---------------------------|---------------|-----------------|------------|---------------|-----------------|------|
| A—Inbred lines crossed with (B41 × Oh7A) | | | | | | | | | |
| 1 | R132..... | 93 | 20 | 82 | 42 | 99 | 32 | 0 | 3 |
| 2 | R134..... | 113 | 22 | 79 | 66 | 100 | 36 | 5 | 0 |
| 3 | R197..... | 104 | 22 | 82 | 62 | 100 | 35 | 5 | 2 |
| 4 | R198..... | 101 | 24 | 83 | 34 | 99 | 36 | 13 | 4 |
| 5 | K7-25..... | 99 | 23 | 78 | 81 | 100 | 34 | 1 | 0 |
| 6 | K7-47..... | 110 | 23 | 81 | 75 | 100 | 36 | 0 | 10 |
| 7 | K7-50..... | 104 | 22 | 85 | 90 | 100 | 33 | 2 | 4 |
| 8 | Mo5..... | 92 | 21 | 78 | 59 | 100 | 29 | 0 | 8 |
| 9 | Mo6..... | 112 | 21 | 79 | 83 | 99 | 36 | 1 | 5 |
| 10 | Mo7..... | 99 | 24 | 78 | 37 | 98 | 38 | 0 | 8 |
| 11 | Mo0225..... | 117 | 24 | 78 | 95 | 100 | 36 | 4 | 5 |
| 12 | Mo2788A..... | 91 | 21 | 76 | 42 | 95 | 32 | 0 | 2 |
| 13 | Mo9294..... | 106 | 24 | 80 | 71 | 100 | 36 | 1 | 4 |
| 14 | Mo11077..... | 115 | 22 | 86 | 40 | 98 | 38 | 3 | 3 |
| 15 | Mo61072..... | 107 | 23 | 80 | 98 | 100 | 36 | 0 | 2 |
| 16 | Ok2011..... | 110 | 22 | 82 | 60 | 100 | 34 | 16 | 4 |
| 17 | Ok2012..... | 106 | 23 | 81 | 39 | 99 | 36 | 4 | 3 |
| 18 | Ok2013..... | 85 | 23 | 80 | 94 | 95 | 34 | 1 | 5 |
| 19 | Ok4001..... | 98 | 23 | 80 | 71 | 99 | 36 | 0 | 2 |
| 20 | Ok4002..... | 105 | 21 | 80 | 89 | 100 | 37 | 1 | 5 |
| 21 | Ok4003..... | 103 | 22 | 81 | 51 | 100 | 32 | 0 | 1 |
| 22 | Ok7001..... | 115 | 21 | 80 | 61 | 100 | 36 | 1 | 5 |
| 23 | Ok7002..... | 92 | 19 | 81 | 42 | 100 | 38 | 5 | 4 |
| 24 | Va12C..... | 102 | 21 | 74 | 96 | 99 | 35 | 1 | 4 |
| 25 | Va23..... | 89 | 23 | 80 | 93 | 94 | 31 | 0 | 3 |
| 26 | Va27..... | 117 | 21 | 79 | 54 | 100 | 36 | 2 | 0 |
| 27 | Va29..... | 118 | 29 | 81 | 61 | 100 | 36 | 4 | 0 |
| 28 | Va35C..... | 114 | 21 | 79 | 88 | 100 | 36 | 2 | 1 |
| 29 | CI.31A..... | 109 | 22 | 80 | 81 | 100 | 34 | 1 | 4 |
| Average..... | | 104 | 22 | 80 | 67 | 99 | 35 | 3 | 3 |
| B—Standard checks | | | | | | | | | |
| 31 | Ill. 1851..... | 112 | 20 | 80 | 73 | 99 | 38 | 0 | 4 |
| 30 | B41 × Oh7A..... | 103 | 21 | 81 | 78 | 91 | 34 | 6 | 1 |
| 33 | U.S. 13..... | 96 | 19 | 83 | 68 | 98 | 36 | 5 | 3 |
| 32 | Ill. 1913..... | 91 | 19 | 87 | 74 | 100 | 33 | 0 | 1 |
| 36 | R158 × CI.42A..... | 86 | 20 | 86 | 92 | 94 | 33 | 1 | 1 |
| 35 | R138 × R158..... | 78 | 20 | 83 | 83 | 92 | 35 | 0 | 0 |
| 34 | Hy2 × R158..... | 65 | 20 | 81 | 95 | 100 | 34 | 1 | 2 |
| Average..... | | 90 | 20 | 83 | 80 | 96 | 35 | 2 | 2 |
| Average of 36 entries..... | | 102 | 22 | 81 | 70 | 98 | 35 | 2 | 3 |

Table 12.—THREE-WAY CROSSES AND STANDARDS
Tested in South-Central Illinois, 1959
(Data in boldface were not statistically different
from the best performance for that characteristic)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|---|------------|---------------|---------------------------|---------------|-----------------|------------|-----------|-----------|-----------------|----------|
| | | | | | | | Plant | Ear | | |
| A—Inbred lines crossed with (WF9 × Oh43) | | | | | | | | | | |
| 1 | R71 | 89 | 19 | 82 | 96 | 100 | 60 | 25 | 3 | 4 |
| 2 | R74 | 79 | 20 | 81 | 91 | 98 | 65 | 26 | 1 | 0 |
| 3 | R74A | 77 | 20 | 75 | 60 | 100 | 68 | 28 | 1 | 5 |
| 4 | R76 | 97 | 20 | 81 | 94 | 98 | 70 | 31 | 3 | 17 |
| 5 | R78 | 88 | 20 | 80 | 91 | 98 | 62 | 28 | 4 | 7 |
| 6 | R84 | 96 | 20 | 79 | 89 | 100 | 64 | 30 | 4 | 3 |
| 7 | R101 | 83 | 19 | 81 | 95 | 100 | 63 | 29 | 1 | 6 |
| 8 | R104 | 87 | 19 | 84 | 90 | 100 | 57 | 29 | 4 | 4 |
| 9 | R109B | 90 | 21 | 81 | 100 | 100 | 65 | 29 | 1 | 6 |
| 10 | R112 | 96 | 19 | 82 | 92 | 98 | 67 | 27 | 0 | 6 |
| 11 | R113 | 55 | 20 | 76 | 97 | 98 | 60 | 27 | 0 | 1 |
| 12 | R114 | 82 | 19 | 80 | 99 | 100 | 70 | 31 | 3 | 11 |
| 13 | R132 | 108 | 20 | 82 | 85 | 100 | 62 | 29 | 1 | 0 |
| 14 | R134 | 100 | 20 | 80 | 95 | 99 | 70 | 35 | 1 | 3 |
| 15 | R135 | 74 | 20 | 83 | 90 | 91 | 63 | 30 | 1 | 9 |
| 16 | R151 | 106 | 21 | 83 | 94 | 100 | 65 | 30 | 1 | 1 |
| 17 | R154 | 95 | 19 | 83 | 85 | 100 | 62 | 27 | 1 | 1 |
| 18 | R158 | 75 | 19 | 81 | 97 | 98 | 68 | 29 | 10 | 5 |
| 19 | R159 | 89 | 20 | 81 | 95 | 100 | 66 | 27 | 1 | 8 |
| 20 | R166 | 84 | 20 | 85 | 34 | 99 | 59 | 24 | 0 | 0 |
| 21 | R168 | 89 | 18 | 85 | 99 | 100 | 65 | 27 | 3 | 3 |
| 22 | R172 | 95 | 20 | 83 | 99 | 98 | 65 | 31 | 3 | 3 |
| 23 | R180 | 89 | 19 | 83 | 89 | 100 | 65 | 29 | 1 | 4 |
| 24 | R181 | 100 | 18 | 79 | 90 | 100 | 66 | 29 | 1 | 1 |
| 25 | R182 | 77 | 18 | 82 | 100 | 100 | 68 | 30 | 4 | 1 |
| 26 | R183 | 80 | 22 | 80 | 99 | 100 | 70 | 30 | 1 | 3 |
| 27 | R192 | 93 | 20 | 79 | 99 | 100 | 64 | 29 | 0 | 18 |
| 28 | R193 | 98 | 20 | 81 | 95 | 96 | 69 | 31 | 0 | 1 |
| 29 | R194 | 99 | 21 | 82 | 94 | 100 | 65 | 32 | 0 | 3 |
| 30 | R195 | 91 | 18 | 80 | 98 | 100 | 66 | 28 | 0 | 9 |
| 31 | R196 | 96 | 20 | 81 | 99 | 98 | 69 | 34 | 1 | 1 |
| 32 | R197 | 102 | 21 | 83 | 94 | 100 | 66 | 33 | 8 | 3 |
| 33 | R198 | 105 | 21 | 83 | 90 | 99 | 69 | 32 | 8 | 13 |
| | Average | 90 | 20 | 81 | 92 | 99 | 65 | 29 | 2 | 5 |
| B—Single crosses | | | | | | | | | | |
| 34 | WF9 × Oh43 | 100 | 19 | 84 | 99 | 98 | 65 | 26 | 0 | 5 |
| 35 | WF9 × B37 | 83 | 19 | 78 | 100 | 100 | 66 | 31 | 5 | 24 |
| 36 | B41 × Oh7A | 116 | 22 | 80 | 84 | 100 | 71 | 34 | 2 | 2 |
| | Average | 100 | 20 | 81 | 94 | 99 | 67 | 30 | 2 | 10 |
| C—Inbred lines crossed with (WF9 × B37) | | | | | | | | | | |
| 1 | R71 | 97 | 22 | 79 | 96 | 100 | 74 | 37 | 1 | 1 |
| 2 | R74 | 100 | 19 | 81 | 99 | 100 | 66 | 29 | 5 | 3 |
| 3 | R74A | 57 | 20 | 70 | 98 | 100 | 69 | 33 | 3 | 11 |
| 4 | R76 | 81 | 20 | 78 | 100 | 100 | 71 | 33 | 3 | 15 |
| 5 | R78 | 89 | 20 | 81 | 94 | 93 | 66 | 31 | 0 | 6 |
| 6 | R84 | 89 | 19 | 81 | 89 | 100 | 63 | 31 | 0 | 6 |
| 7 | R101 | 84 | 19 | 82 | 91 | 100 | 63 | 28 | 1 | 9 |
| 8 | R104 | 90 | 19 | 84 | 59 | 98 | 71 | 34 | 1 | 3 |
| 9 | R109B | 94 | 20 | 81 | 93 | 95 | 66 | 29 | 1 | 3 |
| 10 | R112 | 93 | 19 | 82 | 96 | 100 | 66 | 31 | 0 | 8 |
| 11 | R113 | 67 | 20 | 77 | 100 | 100 | 66 | 32 | 0 | 4 |
| 12 | R114 | 87 | 19 | 78 | 100 | 100 | 79 | 39 | 0 | 5 |
| 13 | R132 | 97 | 18 | 82 | 60 | 100 | 65 | 31 | 0 | 3 |
| 14 | R134 | 104 | 20 | 78 | 97 | 96 | 76 | 37 | 5 | 0 |
| 15 | R135 | 70 | 19 | 80 | 98 | 100 | 68 | 34 | 4 | 14 |

(Table is continued on next page)

Table 12.—Continued

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|--|-----------------|---------------|---------------------------|---------------|-----------------|--------|--------|--------|-----------------|--------|
| | | | | | | | Plant | Ear | | |
| C — Inbred lines crossed with (WF9 × B37) — concluded | | | | | | | | | | |
| | | | | bu. | percl. | percl. | percl. | percl. | in. | percl. |
| 16 | R151..... | 105 | 21 | 83 | 94 | 96 | 75 | 34 | 3 | 8 |
| 17 | R154..... | 101 | 20 | 83 | 96 | 100 | 66 | 29 | 1 | 4 |
| 18 | R158..... | 71 | 19 | 80 | 98 | 100 | 72 | 33 | 4 | 5 |
| 19 | R159..... | 87 | 19 | 78 | 99 | 100 | 67 | 31 | 0 | 10 |
| 20 | R166..... | 89 | 18 | 86 | 78 | 100 | 64 | 28 | 0 | 1 |
| 21 | R168..... | 84 | 19 | 80 | 98 | 100 | 67 | 33 | 1 | 5 |
| 22 | R172..... | 101 | 19 | 82 | 99 | 100 | 65 | 32 | 1 | 4 |
| 23 | R180..... | 76 | 19 | 82 | 93 | 93 | 68 | 33 | 3 | 7 |
| 24 | R181..... | 94 | 18 | 79 | 93 | 100 | 69 | 28 | 0 | 9 |
| 25 | R182..... | 72 | 18 | 81 | 100 | 96 | 64 | 29 | 0 | 3 |
| 26 | R183..... | 86 | 20 | 80 | 100 | 99 | 74 | 35 | 0 | 3 |
| 27 | R192..... | 97 | 21 | 80 | 96 | 100 | 73 | 32 | 0 | 15 |
| 28 | R193..... | 90 | 19 | 82 | 96 | 100 | 72 | 33 | 1 | 3 |
| 29 | R194..... | 101 | 20 | 81 | 93 | 100 | 70 | 30 | 0 | 3 |
| 30 | R195..... | 76 | 18 | 79 | 96 | 100 | 67 | 35 | 1 | 4 |
| 31 | R196..... | 79 | 19 | 79 | 100 | 95 | 69 | 36 | 1 | 7 |
| 32 | R197..... | 103 | 20 | 82 | 90 | 96 | 73 | 36 | 1 | 3 |
| 33 | R198..... | 104 | 20 | 82 | 94 | 99 | 73 | 35 | 4 | 19 |
| | Average..... | 88 | 19 | 80 | 93 | 99 | 69 | 32 | 1 | 6 |
| D — Single crosses | | | | | | | | | | |
| 34 | WF9 × Oh43..... | 106 | 19 | 85 | 95 | 100 | 65 | 30 | 1 | 1 |
| 35 | WF9 × B37..... | 88 | 19 | 79 | 100 | 100 | 71 | 32 | 2 | 15 |
| 36 | B41 × Oh7A..... | 102 | 22 | 81 | 91 | 95 | 72 | 34 | 3 | 1 |
| | Average..... | 99 | 20 | 82 | 96 | 98 | 69 | 32 | 2 | 6 |
| E — Inbred lines crossed with (B41 × Oh7A) | | | | | | | | | | |
| 1 | R71..... | 106 | 22 | 82 | 91 | 98 | 65 | 33 | 0 | 3 |
| 2 | R74..... | 98 | 21 | 81 | 100 | 98 | 63 | 26 | 0 | 3 |
| 3 | R74A..... | 74 | 20 | 74 | 99 | 100 | 67 | 32 | 1 | 9 |
| 4 | R76..... | 107 | 20 | 81 | 96 | 100 | 77 | 39 | 4 | 21 |
| 5 | R78..... | 82 | 22 | 80 | 90 | 99 | 62 | 32 | 1 | 1 |
| 6 | R84..... | 83 | 20 | 80 | 94 | 100 | 68 | 34 | 0 | 8 |
| 7 | R101..... | 75 | 20 | 83 | 82 | 99 | 65 | 33 | 0 | 5 |
| 8 | R104..... | 99 | 19 | 85 | 64 | 100 | 68 | 37 | 0 | 1 |
| 9 | R109B..... | 89 | 21 | 81 | 99 | 100 | 67 | 33 | 1 | 1 |
| 10 | R112..... | 90 | 20 | 81 | 94 | 100 | 61 | 28 | 1 | 4 |
| 11 | R113..... | 59 | 21 | 77 | 99 | 99 | 63 | 31 | 0 | 0 |
| 12 | R114..... | 72 | 19 | 77 | 96 | 99 | 74 | 35 | 1 | 10 |
| 13 | R132..... | 93 | 20 | 83 | 43 | 100 | 70 | 33 | 0 | 1 |
| 14 | R134..... | 114 | 21 | 78 | 94 | 99 | 78 | 38 | 1 | 0 |
| 15 | R135..... | 80 | 20 | 81 | 87 | 99 | 74 | 38 | 0 | 15 |
| 16 | R151..... | 112 | 21 | 85 | 92 | 96 | 71 | 39 | 3 | 4 |
| 17 | R154..... | 88 | 20 | 84 | 71 | 100 | 67 | 33 | 0 | 0 |
| 18 | R158..... | 79 | 19 | 82 | 96 | 98 | 73 | 32 | 1 | 0 |
| 19 | R159..... | 90 | 22 | 80 | 99 | 100 | 70 | 34 | 0 | 15 |
| 20 | R166..... | 89 | 20 | 86 | 35 | 99 | 61 | 30 | 1 | 1 |
| 21 | R168..... | 90 | 19 | 84 | 94 | 100 | 64 | 33 | 1 | 6 |
| 22 | R172..... | 103 | 19 | 83 | 98 | 98 | 65 | 32 | 1 | 1 |
| 23 | R180..... | 89 | 21 | 81 | 91 | 99 | 72 | 34 | 3 | 4 |
| 24 | R181..... | 104 | 18 | 82 | 58 | 99 | 76 | 36 | 1 | 1 |
| 25 | R182..... | 85 | 20 | 81 | 98 | 100 | 70 | 31 | 1 | 0 |
| 26 | R183..... | 95 | 22 | 80 | 98 | 100 | 77 | 39 | 0 | 5 |
| 27 | R192..... | 101 | 23 | 82 | 82 | 99 | 74 | 36 | 1 | 12 |
| 28 | R193..... | 98 | 20 | 83 | 89 | 100 | 66 | 31 | 0 | 3 |
| 29 | R194..... | 94 | 21 | 81 | 91 | 100 | 69 | 35 | 0 | 3 |
| 30 | R195..... | 97 | 19 | 83 | 90 | 100 | 65 | 32 | 0 | 3 |
| | Average..... | 92 | 20 | 81 | 87 | 99 | 69 | 34 | 1 | 5 |

(Table is concluded on next page)

Table 12.—Concluded

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|--|---------------|---------------|---------------------------|---------------|-----------------|-------|--------|-----|-----------------|------|
| | | | | | | | Plant | Ear | | |
| F—Single crosses | | | | | | | | | | |
| 34 | WF9×Oh43..... | 95 | 19 | 86 | 95 | 94 | 63 | 26 | 0 | 1 |
| 35 | WF9×B37..... | 74 | 19 | 80 | 99 | 100 | 65 | 30 | 2 | 12 |
| 36 | B41×Oh7A..... | 108 | 22 | 80 | 80 | 100 | 74 | 37 | 0 | 1 |
| | Average..... | 92 | 20 | 82 | 91 | 98 | 67 | 31 | 1 | 5 |
| G—Mean of inbred lines crossed with three testers | | | | | | | | | | |
| 1 | R71..... | 97 | 21 | 81 | 95 | 99 | 66 | 32 | 1 | 3 |
| 2 | R74..... | 93 | 20 | 81 | 97 | 98 | 65 | 27 | 2 | |
| 3 | R74A..... | 69 | 20 | 73 | 98 | 100 | 68 | 31 | 2 | 8 |
| 4 | R76..... | 95 | 20 | 80 | 97 | 99 | 73 | 34 | 3 | 18 |
| 5 | R78..... | 86 | 21 | 80 | 92 | 96 | 63 | 30 | 2 | 5 |
| 6 | R84..... | 89 | 20 | 80 | 90 | 100 | 65 | 31 | 1 | 5 |
| 7 | R101..... | 80 | 19 | 82 | 90 | 100 | 64 | 30 | 1 | 7 |
| 8 | R104..... | 92 | 19 | 84 | 71 | 99 | 65 | 33 | 2 | 3 |
| 9 | R109B..... | 91 | 21 | 81 | 97 | 98 | 66 | 30 | 1 | 3 |
| 10 | R112..... | 93 | 19 | 82 | 94 | 99 | 65 | 29 | 0 | 6 |
| 11 | R113..... | 60 | 20 | 76 | 99 | 99 | 63 | 30 | 0 | 2 |
| 12 | R114..... | 80 | 19 | 78 | 98 | 100 | 74 | 35 | 1 | 9 |
| 13 | R132..... | 99 | 19 | 82 | 63 | 100 | 65 | 31 | 0 | 1 |
| 14 | R134..... | 106 | 21 | 79 | 95 | 98 | 75 | 36 | 3 | 1 |
| 15 | R135..... | 75 | 20 | 81 | 92 | 97 | 68 | 34 | 2 | 13 |
| 16 | R151..... | 107 | 21 | 84 | 93 | 98 | 70 | 34 | 2 | 4 |
| 17 | R154..... | 94 | 20 | 84 | 84 | 100 | 65 | 30 | 1 | 2 |
| 18 | R158..... | 75 | 19 | 81 | 97 | 98 | 71 | 31 | 5 | 3 |
| 19 | R159..... | 89 | 20 | 80 | 98 | 100 | 68 | 30 | 0 | 11 |
| 20 | R166..... | 87 | 19 | 86 | 49 | 99 | 61 | 27 | 0 | 1 |
| 21 | R168..... | 88 | 19 | 83 | 97 | 100 | 65 | 31 | 2 | 5 |
| 22 | R172..... | 100 | 20 | 83 | 98 | 98 | 65 | 32 | 2 | 3 |
| 23 | R180..... | 85 | 20 | 82 | 91 | 97 | 68 | 32 | 2 | 5 |
| 24 | R181..... | 99 | 18 | 80 | 80 | 100 | 70 | 31 | 1 | 4 |
| 25 | R182..... | 78 | 19 | 81 | 99 | 99 | 67 | 30 | 2 | 1 |
| 26 | R183..... | 87 | 21 | 80 | 99 | 100 | 74 | 35 | 0 | 3 |
| 27 | R192..... | 97 | 21 | 80 | 92 | 100 | 70 | 32 | 0 | 15 |
| 28 | R193..... | 95 | 20 | 82 | 93 | 99 | 69 | 32 | 0 | 2 |
| 29 | R194..... | 98 | 21 | 82 | 93 | 100 | 68 | 32 | 0 | 3 |
| 30 | R195..... | 88 | 19 | 80 | 95 | 100 | 66 | 32 | 0 | 5 |
| 31 | R196..... | 94 | 20 | 80 | 99 | 98 | 68 | 34 | 2 | 3 |
| 32 | R197..... | 102 | 21 | 82 | 88 | 98 | 68 | 34 | 5 | 3 |
| 33 | R198..... | 104 | 21 | 83 | 85 | 99 | 70 | 34 | 5 | 14 |
| | Average..... | 90 | 20 | 81 | 91 | 99 | 68 | 32 | 2 | 5 |
| H—Mean of three single-cross testers | | | | | | | | | | |
| 34 | WF9×Oh43..... | 100 | 19 | 85 | 96 | 97 | 64 | 27 | 0 | 2 |
| 35 | WF9×B37..... | 82 | 19 | 79 | 99 | 100 | 67 | 31 | 3 | 17 |
| 36 | B41×Oh7A..... | 109 | 22 | 80 | 85 | 98 | 72 | 35 | 2 | 1 |
| | Average..... | 97 | 20 | 81 | 93 | 98 | 68 | 31 | 2 | 7 |

Table 13.—STATE-WIDE PERFORMANCE OF ILLINOIS
THREE-WAY CROSSES AND STANDARDS
Tested in Illinois, 1959

(Data in **boldface** were not statistically different
from the best performance for that characteristic)

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height Plant | Height Ear | Dropped ears | Smut |
|---|------------|---------------|---------------------------|---------------|-----------------|------------|-----------------|---------------|-----------------|----------|
| A—Inbred lines crossed with (WF9 × Oh43) | | | | | | | | | | |
| 1 | R71..... | 98 | 22 | 82 | 94 | 99 | 71 | 31 | 2 | 4 |
| 2 | R74..... | 81 | 23 | 79 | 92 | 98 | 73 | 31 | 0 | 1 |
| 3 | R74A..... | 71 | 23 | 74 | 97 | 97 | 75 | 31 | 1 | 7 |
| 4 | R76..... | 98 | 23 | 79 | 81 | 94 | 80 | 39 | 6 | 9 |
| 5 | R78..... | 94 | 23 | 81 | 83 | 96 | 73 | 34 | 4 | 5 |
| 6 | R84..... | 86 | 22 | 79 | 87 | 95 | 73 | 37 | 4 | 6 |
| 7 | R101..... | 90 | 22 | 80 | 90 | 99 | 75 | 34 | 1 | 8 |
| 8 | R104..... | 90 | 22 | 83 | 86 | 99 | 71 | 34 | 2 | 5 |
| 9 | R109B..... | 92 | 23 | 81 | 97 | 94 | 74 | 34 | 1 | 3 |
| 10 | R112..... | 100 | 21 | 82 | 88 | 96 | 76 | 32 | 2 | 8 |
| 11 | R113..... | 79 | 21 | 76 | 88 | 98 | 71 | 33 | 0 | 3 |
| 12 | R114..... | 82 | 21 | 79 | 95 | 97 | 81 | 35 | 1 | 9 |
| 13 | R132..... | 101 | 23 | 80 | 73 | 100 | 74 | 35 | 2 | |
| 14 | R134..... | 108 | 23 | 79 | 94 | 95 | 82 | 39 | 2 | 3 |
| 15 | R135..... | 82 | 22 | 83 | 80 | 92 | 74 | 35 | 5 | 9 |
| 16 | R151..... | 114 | 23 | 83 | 89 | 99 | 77 | 35 | 2 | 3 |
| 17 | R154..... | 108 | 22 | 82 | 78 | 97 | 76 | 34 | 1 | 3 |
| 18 | R158..... | 86 | 21 | 81 | 94 | 99 | 80 | 35 | 7 | 3 |
| 19 | R159..... | 84 | 23 | 79 | 94 | 98 | 72 | 31 | 1 | 4 |
| 20 | R166..... | 85 | 23 | 83 | 59 | 96 | 66 | 29 | 0 | 2 |
| 21 | R168..... | 100 | 20 | 84 | 92 | 99 | 73 | 32 | 2 | 3 |
| 22 | R172..... | 105 | 22 | 82 | 94 | 99 | 76 | 36 | 1 | 2 |
| 23 | R180..... | 84 | 23 | 79 | 85 | 98 | 72 | 32 | 4 | 5 |
| 24 | R181..... | 105 | 19 | 79 | 80 | 98 | 76 | 33 | 1 | 1 |
| 25 | R182..... | 83 | 21 | 81 | 96 | 96 | 78 | 35 | 4 | 3 |
| 26 | R183..... | 69 | 23 | 78 | 90 | 99 | 80 | 36 | 1 | 5 |
| 27 | R192..... | 93 | 23 | 79 | 91 | 99 | 77 | 34 | 1 | 12 |
| 28 | R193..... | 97 | 22 | 80 | 87 | 97 | 78 | 33 | 1 | 3 |
| 29 | R194..... | 92 | 24 | 80 | 82 | 99 | 75 | 36 | 1 | 3 |
| 30 | R195..... | 88 | 21 | 79 | 93 | 99 | 77 | 35 | 1 | 6 |
| 31 | R196..... | 92 | 22 | 80 | 96 | 99 | 78 | 38 | 3 | 5 |
| 32 | R197..... | 105 | 25 | 81 | 88 | 97 | 77 | 38 | 5 | 2 |
| 33 | R198..... | 103 | 24 | 82 | 85 | 98 | 79 | 37 | 4 | 13 |
| Average..... | | 92 | 22 | 80 | 88 | 97 | 75 | 34 | 2 | 5 |
| Tester WF9×Oh43..... | | 98 | 22 | 81 | 93 | 97 | 75 | 32 | 2 | 3 |

B—Inbred lines crossed with (WF9 × B37)

| | | | | | | | | | | |
|----|------------|----|----|-----------|-----------|-----------|-----------|-----------|----------|----------|
| 1 | R71..... | 98 | 25 | 77 | 95 | 95 | 80 | 37 | 3 | 3 |
| 2 | R74..... | 94 | 24 | 78 | 98 | 89 | 77 | 34 | 3 | 5 |
| 3 | R74A..... | 52 | 24 | 69 | 95 | 99 | 80 | 35 | 2 | 8 |
| 4 | R76..... | 81 | 23 | 77 | 94 | 96 | 82 | 39 | 3 | 16 |
| 5 | R78..... | 87 | 24 | 79 | 84 | 96 | 77 | 33 | 1 | 9 |
| 6 | R84..... | 68 | 22 | 76 | 90 | 99 | 77 | 38 | 1 | 12 |
| 7 | R101..... | 86 | 22 | 79 | 92 | 98 | 74 | 34 | 0 | 8 |
| 8 | R104..... | 87 | 22 | 82 | 71 | 98 | 78 | 38 | 2 | 3 |
| 9 | R109B..... | 85 | 24 | 78 | 94 | 95 | 78 | 35 | 1 | 6 |
| 10 | R112..... | 93 | 22 | 80 | 93 | 98 | 76 | 35 | 2 | 9 |
| 11 | R113..... | 78 | 22 | 75 | 95 | 99 | 74 | 37 | 1 | 6 |
| 12 | R114..... | 85 | 23 | 76 | 96 | 99 | 85 | 40 | 0 | 4 |
| 13 | R132..... | 97 | 22 | 79 | 58 | 98 | 75 | 36 | 1 | 5 |
| 14 | R134..... | 97 | 24 | 76 | 97 | 95 | 83 | 39 | 6 | 4 |
| 15 | R135..... | 75 | 23 | 79 | 87 | 89 | 79 | 40 | 4 | 16 |

(Table is continued on next page)

Table 13.—Continued

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|--|-------|---------------|---------------------------|---------------|-----------------|-------|--------|-----|-----------------|------|
| | | | | | | | Plant | Ear | | |
| B—Inbred lines crossed with (WF9 × B37)—concluded | | | | | | | | | | |
| 16 | R151 | 111 | 24 | 80 | 90 | 98 | 84 | 40 | 3 | 4 |
| 17 | R154 | 105 | 22 | 81 | 83 | 98 | 80 | 37 | 1 | 4 |
| 18 | R158 | 75 | 21 | 77 | 95 | 95 | 84 | 38 | 4 | 6 |
| 19 | R159 | 78 | 23 | 76 | 97 | 99 | 77 | 36 | 0 | 9 |
| 20 | R166 | 91 | 23 | 82 | 85 | 98 | 73 | 34 | 1 | 5 |
| 21 | R168 | 97 | 21 | 80 | 98 | 98 | 75 | 34 | 0 | 8 |
| 22 | R172 | 95 | 23 | 78 | 97 | 100 | 76 | 37 | 1 | 4 |
| 23 | R180 | 79 | 22 | 79 | 94 | 95 | 74 | 35 | 4 | 8 |
| 24 | R181 | 103 | 21 | 78 | 93 | 99 | 79 | 34 | 1 | 5 |
| 25 | R182 | 69 | 21 | 77 | 98 | 88 | 79 | 35 | 1 | 5 |
| 26 | R183 | 61 | 24 | 76 | 99 | 97 | 81 | 40 | 0 | 4 |
| 27 | R192 | 94 | 24 | 77 | 93 | 98 | 82 | 37 | 0 | 13 |
| 28 | R193 | 83 | 23 | 78 | 90 | 99 | 79 | 35 | 2 | 4 |
| 29 | R194 | 95 | 25 | 79 | 93 | 98 | 78 | 38 | 1 | 5 |
| 30 | R195 | 82 | 21 | 77 | 93 | 97 | 77 | 39 | 1 | 6 |
| 31 | R196 | 88 | 23 | 77 | 93 | 98 | 81 | 40 | 1 | 7 |
| 32 | R197 | 105 | 25 | 79 | 82 | 96 | 81 | 41 | 2 | 3 |
| 33 | R198 | 89 | 25 | 78 | 88 | 97 | 83 | 41 | 5 | 18 |
| Average | | 87 | 23 | 78 | 91 | 97 | 79 | 37 | 2 | 7 |
| Tester WF9×B37 | | 79 | 23 | 76 | 95 | 99 | 77 | 36 | 2 | 12 |
| C—Inbred lines crossed with (B41 × Oh7A) | | | | | | | | | | |
| 1 | R71 | 97 | 26 | 80 | 90 | 98 | 77 | 40 | 1 | 3 |
| 2 | R74 | 102 | 25 | 79 | 93 | 99 | 76 | 36 | 0 | 3 |
| 3 | R74A | 38 | 26 | 72 | 98 | 100 | 74 | 37 | 2 | 11 |
| 4 | R76 | 96 | 25 | 77 | 84 | 100 | 85 | 46 | 2 | 16 |
| 5 | R78 | 70 | 26 | 79 | 70 | 99 | 75 | 39 | 0 | 9 |
| 6 | R84 | 55 | 24 | 77 | 90 | 99 | 76 | 42 | 2 | 9 |
| 7 | R101 | 69 | 23 | 80 | 86 | 99 | 76 | 39 | 1 | 8 |
| 8 | R104 | 91 | 23 | 82 | 74 | 96 | 76 | 41 | 1 | 4 |
| 9 | R109B | 81 | 26 | 78 | 95 | 99 | 78 | 42 | 1 | 5 |
| 10 | R112 | 82 | 24 | 80 | 92 | 99 | 74 | 35 | 2 | 9 |
| 11 | R113 | 59 | 24 | 76 | 97 | 99 | 70 | 39 | 0 | 6 |
| 12 | R114 | 75 | 23 | 76 | 91 | 98 | 82 | 41 | 1 | 9 |
| 13 | R132 | 79 | 24 | 79 | 53 | 98 | 79 | 41 | 2 | 4 |
| 14 | R134 | 94 | 26 | 78 | 90 | 99 | 82 | 42 | 5 | 3 |
| 15 | R135 | 54 | 24 | 80 | 89 | 99 | 79 | 42 | 3 | 12 |
| 16 | R151 | 109 | 25 | 81 | 86 | 98 | 82 | 43 | 4 | 6 |
| 17 | R154 | 96 | 23 | 81 | 66 | 100 | 79 | 41 | 2 | 1 |
| 18 | R158 | 75 | 23 | 80 | 96 | 97 | 84 | 41 | 4 | 1 |
| 19 | R159 | 67 | 27 | 76 | 97 | 100 | 78 | 39 | 0 | 8 |
| 20 | R166 | 79 | 24 | 81 | 48 | 99 | 72 | 37 | 1 | 3 |
| 21 | R168 | 93 | 22 | 83 | 96 | 95 | 75 | 39 | 1 | 10 |
| 22 | R172 | 91 | 23 | 81 | 92 | 97 | 78 | 41 | 1 | 5 |
| 23 | R180 | 76 | 24 | 78 | 83 | 99 | 75 | 37 | 3 | 3 |
| 24 | R181 | 102 | 21 | 79 | 67 | 99 | 81 | 40 | 1 | 4 |
| 25 | R182 | 79 | 23 | 79 | 97 | 99 | 78 | 38 | 2 | 1 |
| 26 | R183 | 67 | 25 | 79 | 95 | 98 | 81 | 44 | 1 | 4 |
| 27 | R192 | 80 | 26 | 77 | 80 | 99 | 81 | 42 | 0 | 11 |
| 28 | R193 | 84 | 24 | 78 | 87 | 100 | 77 | 37 | 3 | 2 |
| 29 | R194 | 63 | 27 | 78 | 91 | 99 | 77 | 41 | 2 | 4 |
| 30 | R195 | 77 | 23 | 78 | 93 | 99 | 76 | 42 | 1 | 6 |
| 31 | R196 | 85 | 24 | 77 | 90 | 98 | 78 | 41 | 2 | 6 |
| 32 | R197 | 90 | 26 | 78 | 84 | 97 | 76 | 41 | 4 | 3 |
| 33 | R198 | 81 | 26 | 80 | 72 | 99 | 81 | 46 | 2 | 11 |
| Average | | 80 | 24 | 79 | 85 | 99 | 78 | 40 | 2 | 6 |
| Tester B41×Oh7A | | 68 | 28 | 74 | 68 | 98 | 79 | 41 | 1 | 3 |

(Table is concluded on next page)

Table 13.—Concluded

| Code | Entry | Acre yield | Mois- ture in grain | Shell- ing | Erect plants | Stand | Height | | Dropped ears | Smut |
|---|---------------------------|---------------|---------------------------|---------------|-----------------|---------------|------------|------------|-----------------|---------------|
| | | | | | | | Plant | Ear | | |
| D—Mean of inbred lines crossed with three testers and grown at three locations | | | | | | | | | | |
| | | <i>bu.</i> | <i>perct.</i> | <i>perct.</i> | <i>perct.</i> | <i>perct.</i> | <i>in.</i> | <i>in.</i> | <i>perct.</i> | <i>perct.</i> |
| 1 | R71..... | 98 | 25 | 80 | 93 | 97 | 76 | 36 | 2 | 3 |
| 2 | R74..... | 93 | 24 | 79 | 94 | 95 | 75 | 34 | 1 | 3 |
| 3 | R74A..... | 54 | 24 | 72 | 96 | 99 | 76 | 35 | 1 | 8 |
| 4 | R76..... | 92 | 24 | 78 | 86 | 97 | 82 | 41 | 4 | 13 |
| 5 | R78..... | 83 | 24 | 80 | 79 | 97 | 75 | 35 | 2 | 8 |
| 6 | R84..... | 70 | 23 | 78 | 89 | 98 | 75 | 39 | 3 | 9 |
| 7 | R101..... | 81 | 22 | 80 | 89 | 99 | 75 | 35 | 1 | 8 |
| 8 | R104..... | 89 | 22 | 82 | 77 | 98 | 75 | 38 | 2 | 4 |
| 9 | R109B..... | 86 | 24 | 79 | 95 | 96 | 76 | 37 | 1 | 4 |
| 10 | R112..... | 92 | 23 | 81 | 91 | 98 | 75 | 34 | 2 | 9 |
| 11 | R113..... | 72 | 22 | 76 | 93 | 99 | 72 | 36 | 0 | 5 |
| 12 | R114..... | 81 | 22 | 77 | 94 | 98 | 83 | 38 | 1 | 7 |
| 13 | R132..... | 92 | 23 | 80 | 61 | 98 | 76 | 37 | 1 | 3 |
| 14 | R134..... | 100 | 24 | 78 | 93 | 96 | 82 | 40 | 4 | 3 |
| 15 | R135..... | 70 | 23 | 81 | 85 | 93 | 77 | 39 | 4 | 12 |
| 16 | R151..... | 111 | 24 | 81 | 88 | 98 | 81 | 39 | 3 | 5 |
| 17 | R154..... | 103 | 22 | 82 | 76 | 98 | 78 | 37 | 2 | 3 |
| 18 | R158..... | 79 | 22 | 79 | 95 | 97 | 83 | 38 | 5 | 3 |
| 19 | R159..... | 76 | 24 | 77 | 96 | 99 | 76 | 36 | 1 | 7 |
| 20 | R166..... | 85 | 23 | 82 | 64 | 98 | 70 | 34 | 1 | 3 |
| 21 | R168..... | 97 | 21 | 82 | 95 | 97 | 74 | 35 | 1 | 7 |
| 22 | R172..... | 97 | 23 | 80 | 94 | 99 | 76 | 38 | 1 | 4 |
| 23 | R180..... | 79 | 23 | 79 | 88 | 97 | 74 | 35 | 3 | 5 |
| 24 | R181..... | 104 | 20 | 79 | 80 | 99 | 79 | 36 | 1 | 3 |
| 25 | R182..... | 77 | 22 | 79 | 97 | 94 | 78 | 36 | 2 | 3 |
| 26 | R183..... | 66 | 24 | 78 | 95 | 98 | 81 | 40 | 1 | 4 |
| 27 | R192..... | 89 | 24 | 78 | 88 | 99 | 80 | 38 | 0 | 12 |
| 28 | R193..... | 88 | 23 | 79 | 88 | 99 | 78 | 35 | 2 | 3 |
| 29 | R194..... | 84 | 25 | 79 | 89 | 99 | 76 | 38 | 1 | 4 |
| 30 | R195..... | 82 | 21 | 78 | 93 | 98 | 77 | 39 | 1 | 6 |
| 31 | R196..... | 89 | 23 | 78 | 93 | 98 | 79 | 39 | 2 | 4 |
| 32 | R197..... | 100 | 25 | 79 | 85 | 97 | 78 | 40 | 4 | 3 |
| 33 | R198..... | 91 | 25 | 80 | 82 | 98 | 81 | 41 | 4 | 14 |
| | Average..... | 86 | 23 | 79 | 88 | 98 | 77 | 37 | 2 | 6 |
| | Average of 3 testers..... | 82 | 24 | 77 | 85 | 98 | 77 | 36 | 2 | 6 |

A — Northern Illinois, DeKalb, 1958

| Entry | Acre yield | Oil | Protein | Moisture in grain | Shelling | Erect plants | Stand | Ear height | Smut | per cent. |
|------------------------|------------|-----------|--------------|-------------------|--------------|--------------|-----------|------------|-----------|-----------|
| Ill. 6052 ^b | bu. | per cent. | lb. per acre | per cent. | lb. per acre | per cent. | per cent. | per cent. | per cent. | per cent. |
| U.S. 13 | 124 | 5.44 | 378 | 10.44 | 725 | 40 | 83 | 66 | 99 | 59 |
| Ill. 6021 ^b | 122 | 4.49 | 307 | 9.44 | 645 | 34 | 76 | 69 | 100 | 57 |
| Average | 102 | 5.41 | 309 | 9.60 | 514 | 39 | 75 | 48 | 98 | 62 |
| Average | 116 | 5.11 | 331 | 9.63 | 628 | 38 | 78 | 61 | 99 | 59 |

B — North-Central Illinois, Peoria, 1958-1959

| U.S. 13 | 106 | 6.73 | 399 | 10.10 | 600 | 22 | 80 | 74 | 99 | 58 |
|------------------------|-----|------|-----|-------|-----|----|----|----|----|----|
| Ill. 6052 ^b | 104 | 5.72 | 333 | 9.50 | 553 | 20 | 82 | 81 | 96 | 58 |
| Average | 105 | 6.22 | 366 | 9.80 | 576 | 21 | 81 | 78 | 98 | 58 |
| Average | 105 | 5.80 | 339 | 10.91 | 641 | 21 | .. | 84 | .. | 8 |

C — Central Illinois, Urbana, 1954-1959

| U.S. 13 | 110 | 4.72 | 291 | 10.30 | 634 | 20 | .. | 86 | .. | .. |
|------------------------|-----|------|-----|-------|-----|----|----|----|----|----|
| Ill. 6052 ^b | 103 | 6.37 | 367 | 11.32 | 653 | 22 | .. | 81 | .. | .. |
| Ill. 6021 ^b | 102 | 6.31 | 360 | 11.11 | 635 | 20 | .. | 84 | .. | .. |
| Average | 105 | 5.80 | 339 | 10.91 | 641 | 21 | .. | 84 | .. | .. |

D — Central Illinois, Urbana, 1958-1959

| R182(38-11×K4) | 97 | 5.13 | 279 | 10.20 | 554 | .. | .. | 95 | 97 | .. |
|------------------------|----|------|-----|-------|-----|----|----|----|----|----|
| R158(38-11×K4) | 97 | 5.05 | 274 | 11.02 | 599 | .. | .. | 91 | 98 | .. |
| U.S. 13 | 96 | 4.40 | 237 | 9.80 | 527 | .. | .. | 92 | 98 | .. |
| Ill. 6021 ^b | 92 | 5.92 | 305 | 10.49 | 540 | .. | .. | 86 | 98 | .. |
| R199(38-11×K4) | 88 | 5.64 | 278 | 9.76 | 481 | .. | .. | 88 | 96 | .. |
| Ill. 6115 | 88 | 5.25 | 259 | 11.11 | 548 | .. | .. | 90 | 98 | .. |
| R207(38-11×K4) | 88 | 4.49 | 221 | 10.17 | 501 | .. | .. | 94 | 98 | .. |
| Ill. 6052 ^b | 86 | 6.36 | 306 | 10.67 | 514 | .. | .. | 78 | 95 | .. |
| Ill. 6109 | 86 | 5.32 | 251 | 11.02 | 531 | .. | .. | 87 | 96 | .. |
| R213(38-11×K4) | 84 | 5.50 | 259 | 10.06 | 473 | .. | .. | 92 | 96 | .. |
| Ill. 6062 | 82 | 6.04 | 277 | 11.09 | 509 | .. | .. | 84 | 97 | .. |
| Ill. 6001 ^b | 78 | 6.88 | 300 | 10.39 | 454 | .. | .. | 84 | 98 | .. |
| R183(38-11×K4) | 78 | 5.38 | 235 | 10.97 | 479 | .. | .. | 88 | 98 | .. |
| R85(38-11×K4) | 76 | 4.98 | 212 | 11.75 | 500 | .. | .. | 88 | 93 | .. |
| R120(38-11×K4) | 75 | 4.87 | 205 | 12.58 | 528 | .. | .. | 96 | 96 | .. |
| Average | 86 | 5.41 | 260 | 10.74 | 516 | .. | .. | 89 | 97 | .. |

E — South-Central Illinois, Brownstown, 1958-1959

| Ill. 6021 ^b | 105 | 6.28 | 369 | 10.30 | 606 | 18 | 83 | 88 | 98 | 46 |
|------------------------|-----|------|-----|-------|-----|----|----|----|----|----|
| U.S. 13 | 104 | 4.58 | 267 | 10.08 | 587 | 18 | 84 | 89 | 96 | 43 |
| Ill. 6052 ^b | 102 | 5.32 | 332 | 10.75 | 614 | 18 | 83 | 84 | 96 | 46 |
| Average | 104 | 5.56 | 323 | 10.38 | 602 | 18 | 83 | 87 | 97 | 45 |

^a Data not analyzed statistically. ^b Available for commercial production.

Table 15.—DOUBLE-CROSS HYBRID NUMBERS,
PEDIGREES, AND INDEX TO TABLES

(The order of the single crosses does not indicate
which should be used as seed or pollen parent.)

| Hybrid | Pedigree | Table No. |
|---------------------------------|--|---------------------------|
| AES 510 | (WF9 x W22) (H19 x B9) | 2ABC |
| AES 514 | (B14 x A239) (A295 x W64A) | 2ABC |
| AES 601 | (M14 x B14) (WF9 x W22) | 2ABC |
| AES 610 (III. 1580) | (M14 x A73) (Oh43 x Oh51A) | 2ABC |
| AES 702 (III. 1790) | (C103 x M14) (Hy2 x WF9) | 2ABC, 4ABC, 6ABC |
| AES 703 (III. 3019A) | (WF9 x Oh43) (B14 x B38) | 4ABC |
| AES 704 (III. 3016A) | (WF9 x Oh43) (B14 x B37) | 4ABC |
| AES 705 (III. 3011) | (C103 x Oh43) (WF9 x B14) | 4ABC, 5C, 6BC |
| AES 805 (III. 1770) | (C103 x Oh45) (WF9 x 38-11) | 4ABC, 6ABC, 10ABC |
| AES 809 | (C103 x Oh43) (P8 x WF9) | 6ABC |
| AES 810 | (WF9 x H50) (Oh7B x Oh45) | 6ABC |
| AES 904W | (K64 x Mo22) (T111 x T115) | 10C |
| III. 21 | (Hy2 x 187-2) (WF9 x 38-11) | 2ABC, 4ABC, 6ABC |
| III. 101 | (M14 x WF9) (187-2 x W26) | 2ABC |
| III. 200 | (WF9 x 38-11) (L317 x K4) | 10ABC |
| III. 1091A | (Hy2 x 187-2) (M14 x WF9) | 2ABC |
| III. 1277 | (M14 x WF9) (I.205 x 187-2) | 2ABC |
| III. 1332 | (Hy2 x Oh7) (WF9 x 38-11) | 4ABC, 6ABC, 7C, 9C, 10ABC |
| III. 1332-3 | (WF9 x 38-11) (Oh7 x Cl.42A) | 6ABC |
| III. 1332-4 | (HyR x Oh7) (WF9TMS x 38-11) | 6ABC |
| III. 1539A | (38-11 x Cl.7) (K201 x Cl.21E) | 10ABC |
| III. 1555A | (WF9 x Oh51A) (I.224 x Oh28) | 2ABC |
| III. 1559B | (M14 x Oh28) (WF9 x Oh51A) | 2ABC |
| III. 1560A | (WF9 x Oh51A) (I.205 x Oh28) | 2ABC |
| III. 1570 | (Hy2 x Oh41) (WF9 x 38-11) | 4ABC, 6ABC, 9C, 10ABC |
| III. 1660 | (K4 x K201) (Oh7 x Cl.21E) | 10ABC |
| III. 1813 | (C103 x Oh45) (Hy2 x WF9) | 6ABC |
| III. 1831 | (WF9 x W146) (K237 x Oh45) | 4ABC |
| III. 1849 | (C103 x 38-11) (K201 x Cl.21E) | 10ABC |
| III. 1850 | (C103 x Cl.21E) (38-11 x K201) | 10ABC |
| III. 1851 | (C103 x 38-11) (Oh7 x Cl.21E) | 6ABC, 10ABC, 11B |
| III. 1852 | (C103 x Cl.21E) (38-11 x Oh7) | 10ABC |
| III. 1856 | (38-11 x Oh7) (K201 x Cl.21E) | 6ABC, 10ABC |
| III. 1862 (Iowa 4779) | (M14 x WF9) (Oh43 x Oh51A) | 2ABC |
| III. 1864 | (M14 x WF9) (Oh43 x W22) | 2ABC |
| III. 1880 | (R103 x R104) (WF9 x 38-11) | 6ABC |
| III. 1889 | (C103 x Oh45) (38-11 x Oh29) | 10ABC |
| III. 1890 | (C103 x Oh45) (R75 x 38-11) | 6ABC |
| III. 1893 | (C103 x 38-11) (Oh7B x Oh29) | 6ABC, 10ABC |
| III. 1909 | (R130 x R151) (WF9 x 38-11) | 10ABC |
| III. 1913 | (R151 x R154) (WF9 x 38-11) | 10ABC, 11B |
| III. 1916 | (R130 x R154) (WF9 x 38-11) | 6ABC |
| III. 1918 | (R151 x R153) (WF9 x 38-11) | 6ABC, 10ABC |
| III. 1919 | (R130 x R156) (WF9 x 38-11) | 6ABC |
| III. 1921 | (R71 x R105) (WF9 x 38-11) | 4ABC, 6ABC |
| III. 1922 | (Hy2 x WF9) (R71 x R105) | 6ABC |
| III. 1926 | (R71A x R74) (R75 x 38-11) | 6ABC |
| III. 1928 | (R75 x 38-11) (R98 x R105) | 4ABC, 6ABC, 10ABC |
| III. 1935 | (C103 x R101) (R75 x 38-11) | 10ABC |
| III. 1936 | (Hy2 x WF9) (M14 x B14) | 2ABC |

(Table is continued on next page)

Table 15.—Continued

| Hybrid | Pedigree | Table No. |
|------------------------|------------------------------------|-----------------------|
| III. 1944. | (R71 x R98) (R130 x R153)..... | 6ABC |
| III. 1948. | (R105 x R151) (R153 x R154)..... | 10ABC |
| III. 1952. | (M14 x B14) (A545 x W64A)..... | 2ABC |
| III. 1955. | (M14 x A297) (B14 x W64A)..... | 2ABC |
| III. 1957. | (M14 x A545) (B14 x W64A)..... | 2ABC |
| III. 1958. | (M14 x Oh26A) (B14 x A545)..... | 2ABC |
| III. 1959 (Ind. 6225). | (M14 x W64A) (B14 x A297)..... | 2ABC |
| III. 1960. | (M14 x W64A) (B14 x A545)..... | 2ABC |
| III. 1961. | (B14 x A545) (A239 x W64A)..... | 2ABC |
| III. 1962. | (B14 x A545) (A297 x W64A)..... | 2ABC |
| III. 1964. | (R138 x R143) (R144 x WF9)..... | 10C |
| III. 1966. | (R163 x R165) (WF9 x B14)..... | 4ABC |
| III. 1968. | (R163 x R169) (WF9 x B14)..... | 4ABC |
| III. 1969. | (R165 x R168) (WF9 x B14)..... | 4ABC |
| III. 1969A. | (R165 x WF9) (R168 x B14)..... | 2ABC |
| III. 1971. | (R168 x R169) (WF9 x B14)..... | 4ABC |
| III. 1976. | (38-11 x Oh41) (Oh7 x Cl.21E)..... | 6ABC |
| III. 1978. | (C103 x 38-11) (WF9 x Oh7A)..... | 6ABC |
| III. 1981. | (WF9 x 38-11) (Oh7 x Cl.21E)..... | 6ABC |
| III. 1983. | (Hy2 x B14) (WF9 x 38-11)..... | 6ABC |
| III. 1984. | (Hy2 x WF9) (Oh29 x Oh41)..... | 6ABC |
| III. 1987. | (C103 x B10) (Hy2 x WF9)..... | 6ABC |
| III. 1989. | (Hy2 x WF9) (M14 x Oh29)..... | 6ABC |
| III. 1992. | (C103 x B14) (WF9 x Oh7A)..... | 6ABC |
| III. 1994. | (C103 x WF9) (Oh29 x Oh41)..... | 6ABC |
| III. 1996. | (C103 x B14) (Hy2 x Oh7)..... | 4C, 6ABC, 10C |
| III. 3009. | (B14 x B21) (A297 x W64A)..... | 2ABC |
| III. 3010. | (C103 x N24) (WF9 x B14)..... | 4ABC |
| III. 3011A. | (C103 x B14) (WF9 x Oh43)..... | 4C, 6C |
| III. 3015B. | (WF9 x N24) (B14 x B37)..... | 4BC |
| III. 3016. | (WF9 x B14) (B37 x Oh43)..... | 5C |
| III. 3017. | (WF9 x B14) (B37 x Oh45)..... | 4ABC |
| III. 3020. | (WF9 x B14) (N6 x Oh43)..... | 4ABC |
| III. 3021. | (WF9 x B14) (N6 x Oh45)..... | 4ABC |
| III. 3022. | (WF9 x B14) (N22A x Oh43)..... | 4ABC |
| III. 3023A. | (WF9 x B14) (N24 x Oh43)..... | 4ABC |
| III. 3023B. | (WF9 x N24) (B14 x Oh43)..... | 4BC |
| III. 3026. | (WF9 x B14) (N610 x Oh45)..... | 4ABC |
| III. 3029. | (WF9 x B14) (Oh43 x Oh45)..... | 4ABC |
| III. 3030. | (WF9 x B14) (Oh43 x Oh422)..... | 4ABC |
| III. 3032. | (WF9 x B38) (Oh28 x Oh43)..... | 4ABC |
| III. 3039. | (B37 x B38) (Oh28 x Oh43)..... | 4ABC |
| III. 3042. | (WF9 x B14) (B40 x Oh45)..... | 4ABC |
| III. 3043. | (R71 x R109B) (WF9 x B14)..... | 2ABC, 4ABC |
| III. 3044A. | (R109B x B14) (R113 x WF9)..... | 4C |
| III. 3045A. | (R109B x WF9) (R168 x B14)..... | 4C |
| III. 3046. | (R113 x R168) (WF9 x B14)..... | 2ABC |
| III. 3049. | (Hy2 x WF9) (R71 x R109B)..... | 4C, 5C, 6ABC, 9C, 10C |
| III. 3055. | (R109B x R168) (WF9 x 38-11)..... | 6ABC |
| III. 3074. | (R71 x R168) (R105 x R163)..... | 6ABC |
| III. 3075. | (Hy2 x WF9) (R95 x R101)..... | 6ABC |
| III. 3080. | (Hy2 x WF9) (R101 x Oh451)..... | 6ABC |
| III. 3092. | (Hy2 x WF9) (B38 x K720)..... | 6ABC |
| III. 3093. | (Hy2 x WF9) (B38 x N25)..... | 6ABC |
| III. 3102. | (R101 x Oh41) (WF9 x 38-11)..... | 6C |

(Table is continued on next page)

Table 15.—Continued

| Hybrid | Pedigree | Table No. |
|--------------|------------------------------------|-----------|
| III. 3104. | (R109B x N25) (WF9 x 38-11). | 6ABC |
| III. 3107. | (R154 x B38) (WF9 x 38-11). | 6ABC |
| III. 3115. | (R127 x N35) (WF9 x 38-11). | 6ABC |
| III. 3117. | (R127 x R154) (WF9 x 38-11). | 6ABC |
| III. 3119. | (Hy2 x WF9) (R154 x B38). | 6ABC |
| III. 3121. | (Hy2 x WF9) (R127 x R154). | 6ABC |
| III. 3124. | (Hy2 x WF9) (R71 x R168). | 6ABC |
| III. 3126. | (R101 x Mo3) (38-11 x K201). | 10ABC |
| III. 3129. | (R101 x Mo8) (38-11 x K201). | 10ABC |
| III. 3131. | (R129 x Mo3) (38-11 x K201). | 10ABC |
| III. 3133. | (R127 x Mo3) (38-11 x K201). | 10ABC |
| III. 3135. | (R71A x Mo3) (38-11 x K201). | 10ABC |
| III. 3136. | (R74 x R101) (38-11 x K201). | 10ABC |
| III. 3140. | (38-11 x K201) (Ky126 x Cl.21E). | 10ABC |
| III. 3145. | (R129 x Mo9150) (38-11 x K201). | 10ABC |
| III. 3147. | (R118 x R129) (38-11 x K201). | 10ABC |
| III. 3149. | (R74 x R129) (38-11 x K201). | 10ABC |
| III. 3151. | (WF9 x 38-11) (B14 x Oh41). | 6ABC |
| III. 3152. | (M14 x WF9) (B14 x Oh43). | 2ABC |
| III. 3152A. | (M14 x B14) (WF9 x Oh43). | 2C |
| III. 3152B. | (M14 x Oh43) (WF9 x B14). | 2C |
| III. 3152A1. | (M14 x B14) (Oh43 x W64A). | 2C |
| III. 3152B1. | (M14 x Oh43) (B14 x W64A). | 2C |
| III. 3152-1. | (M14 x W64A) (B14 x Oh43). | 2C |
| III. 3154. | (R132 x R134) (K201C x Cl.21E). | 10C |
| III. 3157. | (R132 x R135) (R134 x R136). | 10C |
| III. 3160. | (WF9 x Oh7) (B14 x Oh43). | 4ABC |
| III. 3167B. | (WF9 x B37) (A545 x Oh43). | 2BC |
| III. 3169B. | (WF9 x Oh43) (B37 x Oh28). | 2BC |
| III. 3173. | (B14 x Oh43) (A545 x N24). | 2BC |
| III. 3174. | (B37 x Oh28) (A297 x Oh43). | 2BC |
| III. 3176B. | (B37 x Oh43) (A545 x Oh28). | 2BC |
| III. 3179. | (R101 x R105) (R151 x Cl.42A). | 2C |
| III. 3182A. | (R105 x WF9) (R151 x R154). | 4C, 6C |
| III. 3182B. | (R105 x R154) (R151 x WF9). | 4C, 6C |
| III. 3183. | (R105 x R153) (R154 x WF9). | 6BC |
| III. 3183A. | (R105 x R154) (R153 x WF9). | 4C, 6C |
| III. 3184A. | (R105 x WF9) (R154 x Cl.42A). | 4C, 6C |
| III. 3186. | (R151 x Cl.42A) (R154 x WF9). | 6BC |
| III. 3190. | (C103 x K201) (Ky126 x Oh7B). | 10BC |
| III. 3192. | (C103 x Oh7B) (Ky126 x N82481). | 10BC |
| III. 3192A. | (C103 x Ky126) (N82481 x Oh7B). | 10BC |
| III. 3193. | (38-11 x K712) (K201 x Oh7B). | 10BC |
| III. 3197B. | (K201 x Cl.21E) (K712 x Oh7B). | 10BC |
| III. 3198A. | (K201 x Ky126) (N82481 x Oh7B). | 10BC |
| III. 3204A. | (C103 x K712) (K201 x Ky126). | 10BC |
| III. 3206. | (C103 x K712) (K201 x Cl.21E). | 10BC |
| III. 3210. | (C103 x K712) (Ky126 x Cl.21E). | 10BC |
| III. 3214. | (K201 x Ky126) (K712 x Oh7B). | 10BC |
| III. 3217. | (Hy2 x WF9) (R109B x H60). | 6C |
| III. 3218. | (Hy2 x WF9) (H51 x H60). | 6C |
| III. 3219. | (Hy2 x WF9) (H51 x 187-2-13657-6). | 6C |
| III. 3220. | (Hy2 x WF9) (H54 x H60). | 6C |
| III. 3221. | (Hy2 x WF9) (H54 x 187-2-13657-6). | 6C |
| III. 3222. | (Hy2 x WF9) (H60 x K758). | 6C |

(Table is continued on next page)

Table 15.—Continued

| Hybrid | Pedigree | Table No. |
|-------------|------------------------------------|-----------|
| III. 3223. | (Hy2 x WF9) (H60 x Cl.30). | 6C |
| III. 3224. | (Hy2 x WF9) (H60 x Cl.38B). | 6C |
| III. 3225. | (Hy2 x WF9) (H60 x 187-2-13657-6). | 6C |
| III. 3226. | (Hy2 x H60) (WF9 x 38-11). | 6C |
| III. 3227. | (Hy2 x K757) (WF9 x 38-11). | 6C |
| III. 3228. | (R71 x H60) (WF9 x 38-11). | 6C |
| III. 3229. | (R109B x H60) (WF9 x 38-11). | 6C |
| III. 3230. | (WF9 x 38-11) (H53 x H60). | 6C |
| III. 3231. | (WF9 x 38-11) (H53 x K757). | 6C |
| III. 3232. | (WF9 x 38-11) (H60 x K757). | 6C |
| III. 3233. | (WF9 x 38-11) (H60 x Cl.30). | 6C |
| III. 3234. | (WF9 x 38-11) (H60 x Cl.42A). | 6C |
| III. 3235. | (WF9 x 38-11) (K757 x Cl.30). | 6C |
| III. 3236. | (R101 x WF9) (R105 x Cl.42A). | 6C |
| III. 3237. | (R101 x WF9) (R151 x R154). | 6C |
| III. 3237A. | (R101 x R154) (R151 x WF9). | 6C |
| III. 3238. | (R101 x WF9) (R151 x Cl.42A). | 6C |
| III. 3239. | (R101 x WF9) (R154 x Cl.42A). | 6C |
| III. 3240. | (R105 x WF9) (R151 x Cl.42A). | 6C |
| III. 3240A. | (R105 x Cl.42A) (R151 x WF9). | 6C |
| III. 3241. | (R105 x R154) (R130 x WF9). | 6C |
| III. 3242. | (R101 x R105) (R151 x WF9). | 6C |
| III. 3244. | (R105 x R153) (R151 x WF9). | 6C |
| III. 3246. | (R105 x R130) (R153 x WF9). | 6C |
| III. 3247. | (R130 x R154) (R153 x WF9). | 6C |
| III. 3248. | (R151 x R154) (R153 x WF9). | 6C |
| III. 3249. | (R153 x WF9) (R154 x Cl.42A). | 6C |
| III. 3250. | (K712 x N82481) (Ky126 x Oh41). | 10C |
| III. 3251. | (38-11 x K201) (K711 x Ky126). | 10C |
| III. 3252. | (38-11 x K201) (K711 x Cl.21E). | 10C |
| III. 3253. | (R71 x R74) (R109B x R168). | 6C |
| III. 3254. | (R71 x R112) (R74 x R109B). | 6C |
| III. 3255. | (R71 x R112) (R109B x R168). | 6C |
| III. 3256. | (R74 x R96B) (R112 x R168). | 6C |
| III. 3257. | (R74 x R109B) (R110 x R112). | 6C |
| III. 3258. | (R74 x R109B) (R112 x R114). | 6C |
| III. 3259. | (R74 x R109B) (R112 x R168). | 6C |
| III. 3259A. | (R74 x R112) (R109B x R168). | 6C |
| III. 3259B. | (R74 x R168) (R109B x R112). | 6C |
| III. 3260. | (R74 x R112) (R109B x R115). | 6C |
| III. 3260A. | (R74 x R115) (R109B x R112). | 6C |
| III. 3264. | (R109B x R168) (R112 x R114). | 6C |
| III. 3265. | (R71 x R109B) (WF9 x Oh43). | 2C |
| III. 3266. | (R74 x R109B) (WF9 x Oh43). | 2C |
| III. 3267. | (R74 x R110) (WF9 x Oh43). | 2C |
| III. 3268. | (R74 x R112) (WF9 x Oh43). | 2C |
| III. 3269. | (R74 x R114) (WF9 x Oh43). | 2C |
| III. 3270. | (R74 x R168) (WF9 x Oh43). | 2C |
| III. 3271. | (R96B x R112) (WF9 x Oh43). | 2C |
| III. 3272. | (R109B x R112) (WF9 x Oh43). | 2C |
| III. 3273. | (R109B x R114) (WF9 x Oh43). | 2C |
| III. 3274. | (R112 x R168) (WF9 x Oh43). | 2C |
| III. 3275. | (R114 x R168) (WF9 x Oh43). | 2C |
| III. 3276. | (R71 x R109B) (38-11 x K4). | 6C |
| III. 3277. | (R74 x R109B) (38-11 x K4). | 6C |

(Table is continued on next page)

Table 15.—Continued

| Hybrid | Pedigree | Table No. |
|-----------------------|-----------------------------|-----------|
| III. 3278 | (R74 x R110) (38-11 x K4) | 6C |
| III. 3279 | (R74 x R112) (38-11 x K4) | 6C |
| III. 3280 | (R74 x R114) (38-11 x K4) | 6C |
| III. 3281 | (R74 x R168) (38-11 x K4) | 6C |
| III. 3282 | (R96B x R112) (38-11 x K4) | 6C |
| III. 3283 | (R109B x R112) (38-11 x K4) | 6C |
| III. 3284 | (R109B x R114) (38-11 x K4) | 6C |
| III. 3285 | (R112 x R168) (38-11 x K4) | 6C |
| III. 3287 | (C103 x Oh43) (WF9 x Oh51A) | 2BC |
| III. 3291 | (P8 x WF9) (B14 x Oh43) | 4BC |
| III. 3294 | (C103 x Hy2) (P8 x WF9) | 4BC |
| III. 3300 | (M14 x Oh43) (R113 x B14) | 2C |
| III. 3300A | (M14 x R113) (B14 x Oh43) | 2C |
| III. 3301 | (M14 x Oh43) (R168 x B14) | 2C |
| III. 3302 | (M14 x B14) (R172 x WF9) | 2C |
| III. 3302A1 | (M14 x W64A) (R172 x B14) | 2C |
| III. 3303 | (M14 x Oh43) (R172 x B14) | 2C |
| III. 3304 | (M14 x B37) (WF9 x Oh43) | 2C |
| III. 3305 | (M14 x A295) (WF9 x Oh43) | 2C |
| III. 3306 | (M14 x Oh43) (L12 x B14) | 2C |
| III. 3307 | (R113 x B14) (R172 x WF9) | 2C |
| III. 3308 | (R113 x Oh43) (L12 x B14) | 2C |
| III. 3309 | (R113 x B14) (WF9 x Oh43) | 2C |
| III. 3309-1 | (R113 x B14) (Oh43 x W64A) | 2C |
| III. 3310 | (R165 x B14) (WF9 x Oh43) | 2C |
| III. 3311 | (R168 x B14) (WF9 x Oh43) | 2C |
| III. 3312 | (R172 x B14) (WF9 x Oh43) | 2C |
| III. 3312-1 | (R172 x B14) (Oh43 x W64A) | 2C |
| III. 3313 | (L12 x B14) (Oh43 x W64A) | 2C |
| III. 3314 | (Hy2 x R109B) (R168 x B14) | 4C |
| III. 3315 | (Hy2 x R109B) (WF9 x B14) | 4C |
| III. 3315A | (Hy2 x WF9) (R109B x B14) | 4C |
| III. 3316 | (Hy2 x WF9) (R113 x B14) | 4C |
| III. 3317 | (Hy2 x WF9) (R165 x B14) | 4C |
| III. 3318 | (Hy2 x WF9) (R168 x B14) | 4C |
| III. 3318A | (Hy2 x R168) (WF9 x B14) | 4C |
| III. 3319 | (Hy2 x WF9) (R172 x B14) | 4C |
| III. 3320 | (R109B x R113) (R168 x B14) | 4C |
| III. 3321 | (R109B x R165) (R168 x B14) | 4C |
| III. 3322 | (R109B x Oh28) (R168 x B14) | 4C |
| III. 3323 | (R109B x R172) (WF9 x B14) | 4C |
| III. 3323A | (R109B x WF9) (R172 x B14) | 4C |
| III. 3325 | (R109B x WF9) (B14 x Oh28) | 4C |
| III. 3325A | (R109B x Oh28) (WF9 x B14) | 4C |
| III. 3326 | (R168 x B14) (WF9 x Oh28) | 4C |
| III. 3326A | (R168 x Oh28) (WF9 x B14) | 4C |
| III. 3328 | (Hy2 x R129) (R71 x R74) | 6C |
| III. 3329 | (Hy2 x WF9) (R71 x R74) | 6C |
| III. 3330 | (Hy2 x 38-11) (R71 x R74) | 6C |
| III. 3331 | (Hy2 x R129) (R71 x WF9) | 6C |
| III. 3332 | (Hy2 x R74) (R127 x WF9) | 6C |
| III. 3332A | (Hy2 x WF9) (R74 x R127) | 6C |
| III. 3333 | (Hy2 x R129) (R74 x WF9) | 6C |
| III. 3334 | (Hy2 x R154) (R74 x WF9) | 6C |
| III. 3335 | (C103 x R113) (Hy2 x 38-11) | 10C |

(Table is continued on next page)

Table 15.—Continued

| Hybrid | Pedigree | Table No. |
|-------------|-------------------------------|-----------|
| III. 3336. | (C103 x R153) (Hy2 x R154). | 10C |
| III. 3337. | (C103 x Hy2) (R154 x 38-11). | 10C |
| III. 3337A. | (C103 x R154) (Hy2 x 38-11). | 10C |
| III. 3337B. | (C103 x 38-11) (Hy2 x R154). | 10C |
| III. 3338. | (C103 x R154) (Hy2 x R168). | 10C |
| III. 3338A. | (C103 x R168) (Hy2 x R154). | 10C |
| III. 3339. | (C103 x Hy2) (R168 x 38-11). | 10C |
| III. 3339A. | (C103 x R168) (Hy2 x 38-11). | 10C |
| III. 3339B. | (C103 x 38-11) (Hy2 x R168). | 10C |
| III. 3340. | (C103 x R159) (Hy2 x 38-11). | 10C |
| III. 3341. | (C103 x R154) (R168 x 38-11). | 10C |
| III. 3341A. | (C103 x R168) (R154 x 38-11). | 10C |
| III. 3342. | (Hy2 x R168) (R154 x 38-11). | 6C |
| III. 3343. | (R71 x R74) (H49 x H55). | 6C |
| III. 3344. | (R71 x R105) (H49 x H55). | 6C |
| III. 3345. | (R71 x R109B) (H49 x H55). | 4C, 6C |
| III. 3346. | (R71 x R168) (H49 x H55). | 6C |
| III. 3347. | (R74 x R101) (H49 x H55). | 4C, 6C |
| III. 3348. | (R74 x R109B) (H49 x H55). | 4C, 6C |
| III. 3349. | (R74 x R168) (H49 x H55). | 6C |
| III. 3350. | (R101 x Oh41) (H49 x H55). | 6C |
| III. 3351. | (R109B x R168) (H49 x H55). | 6C |
| III. 3353. | (R71 x R74) (H49 x H51). | 6C |
| III. 3354. | (R71 x R105) (H49 x H51). | 6C |
| III. 3355. | (R71 x R109B) (H49 x H51). | 6C, 10C |
| III. 3356. | (R71 x R168) (H49 x H51). | 6C |
| III. 3357. | (R74 x R101) (H49 x H51). | 6C |
| III. 3358. | (R74 x R109B) (H49 x H51). | 6C |
| III. 3359. | (R74 x R168) (H49 x H51). | 6C |
| III. 3360. | (R101 x Oh41) (H49 x H51). | 6C, 10C |
| III. 3361. | (R109B x R168) (H49 x H51). | 6C |
| III. 3362. | (Oh7 x Cl.42A) (H49 x H51). | 6C, 10C |
| III. 3363. | (C103 x B14) (R109B x WF9). | 6C |
| III. 3364. | (R74 x R101) (K201 x Cl.21E). | 6C |
| III. 3365. | (Hy2 x R71) (WF9 x 38-11). | 6C |
| III. 3366. | (Hy2 x R109B) (WF9 x 38-11). | 6C |
| III. 3367. | (R74 x WF9) (Oh7 x Cl.21E). | 6C |
| III. 3368. | (Hy2 x R71) (WF9 x B14). | 6C |
| III. 3369. | (C103 x B14) (R71 x WF9). | 6C |
| III. 3370. | (C103 x B14) (R74 x WF9). | 6C |
| III. 3371. | (C103 x B14) (R172 x WF9). | 6C |
| III. 3372. | (C103 x Cl.7) (R74 x WF9). | 6C |
| III. 3373. | (C103 x WF9) (R101 x Oh41). | 6C |
| III. 3374. | (R101 x Oh41) (WF9 x B14). | 6C |
| III. 3375. | (C103 x WF9) (Hy2 x Cl.42A). | 6C |
| III. 3376. | (Hy2 x Cl.42A) (WF9 x B14). | 6C |
| III. 3377. | (Hy2 x Cl.42A) (WF9 x N6). | 6C |
| III. 3378. | (Hy2 x Cl.42A) (WF9 x W64A). | 6C |
| III. 3379. | (WF9 x W64A) (Oh43 x Oh45R). | 2C |
| III. 3380. | (Hy2 x WF9) (R172 x Oh43). | 2C |
| III. 3381. | (R71 x WF9) (B14 x Oh43). | 2C |
| III. 3382. | (R109B x WF9) (B14 x Oh43). | 2C |
| III. 3383. | (M14 x WF9) (R172 x Oh43). | 2C |
| III. 3384. | (Hy2 x Oh7) (WF9 x Oh41). | 6C |
| III. 2247W. | (R144 x R145) (R146 x R148). | 2ABC |

(Table is concluded on next page)

Table 15.—Concluded

| Hybrid | Pedigree | Table No. |
|-----------------------|-------------------------------------|-------------------------------------|
| III. 2249W | (R147 x R148) (H21 x 33-16) | 4BC |
| III. 6001 | (R78) (38-11 x K4) | 14D |
| III. 6021 | (R75 x R76) (R84 x K4) | 2BC, 4BC, 6BC, 9C, 10C, 14ABCDE |
| III. 6052 | (R78 x 38-11) (R84 x K4) | 2BC, 4BC, 6BC, 9C, 10C, 14ABCDE |
| III. 6062 | (R76 x K4) (R78 x R84) | 6BC, 14D |
| III. 6109 | (R78 x R85) (R92 x R117) | 2C, 4C, 6C, 10C, 14D |
| III. 6115 | (R83A x R91) (R92 x R118) | 2C, 4C, 6C, 10C, 14D |
| A 102 | (Hy2 x Oh7) (128-4A x SS101) | 6ABC |
| A 104 | (Hy2 x Oh7) (R101 x 220A) | 6C |
| A 109 | (Hy2 x Oh7) (88-4A x 128-4A) | 6C |
| A 110 | (Hy2 x Oh7) (88-4A) | 6C |
| Ark. 5614 | (C103 x AK-d20) (AK-8 x Cl.7) | 10C |
| Iowa 4297 (III. 1290) | (M14 x 187-2) (WF9 x I.205) | 4ABC, 5C |
| Iowa 4962 | (M14 x WF9) (B37 x B42) | 4C |
| Iowa 4967 | (M14 x WF9) (B42 x Oh51A) | 2C |
| Iowa 4989 | (WF9 x B14) (B37 x B42) | 4BC |
| Iowa 4991 | (WF9 x B14) (B42 x Oh43) | 4BC |
| Iowa 5018 | (WF9 x B7) (B14 x Cl.31A) | 6C |
| Iowa 5040 | (Hy2 x WF9) (B14 x B48) | 6C |
| Iowa 5052 | (M14 x WF9) (Oh51A x W182D) | 2C |
| Iowa 5115 | (WF9 x B14) (B45 x Cl.31A) | 6BC |
| Iowa 5122 | (WF9 x 38-11) (B14 x B38) | 6C |
| Kan. 2246W | (H30 x K41) (33-16 x K55) | 10C |
| Kan. 2561W | (H28 x H30) (K55 x Mo1V) | 10C |
| Kan. 4003 | (K201R x K711) (K712 x Oh7B) | 10BC |
| Ky. 105 | (38-11 x Oh7B) (T8 x Cl.21E) | 10BC |
| Ky. 5708 | (C103 x Cl.21E) (Cl.29C x Cl.38B) | 10BC |
| Ky. 5712W | (33-16 x Cl.64) (K55 x Ky201) | 10BC |
| Mo. 881 | (Mo7 x Cl.21E) (Oh7B x Oh29) | 10C |
| Mo. 916 | (Mo6 x Cl.21E) (Oh7B x Oh29) | 10C |
| Mo. 996 | (Mo0225 x Mo9689) (T204 x Cl.21) | 10C |
| N.C. 5113 | (K41 x NC42) (K55 x NC88W) | 10C |
| Ohio M15 | (A x W23) (Oh26 x Oh51) | 2ABC |
| Ohio K24 | (WF9 x Oh51A) (Oh33 x Oh40B) | 2ABC |
| Tenn. 501W | (K41 x K44) (T111 x T115) | 10C |
| Tenn. 5005 | (T218 x T220) (T474 x T490) | 10C |
| Tenn. 7015 | (A441-5 x Ky36-11) (T474 x T490) | 10C |
| Tenn. 7018 | (ITE701 x Ky36-11) (T474 x T490) | 10C |
| Tenn. 7110W | (T315 x T337) (E184 x K64) | 10C |
| Tenn. 8106W | (T315 x T331) (A14 x T115) | 10C |
| U.S. 13 | (Hy2 x L317) (WF9 x 38-11) | 4C, 6ABC, 7C, 10ABC, 11B, 14ACDE |
| U.S. 523W | (K55 x K64) (Ky27 x Ky49) | 6C, 10ABC |
| U.S. 642 | (Cl.20 x Cl.317B) (Cl.42A x Cl.90A) | 10C |
| U.S. 658 | (Cl.7 x Cl.90A) (Cl.20 x Cl.38B) | 10C |
| VPI 648 | (C103 x Hy3) (WF9 x T8) | 10C |
| VPI 653 | (WF9 x T8) (K155 x Oh43) | 10C |

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